Lecture
ON
DISEASES OF THE CHEST CAVITY
REQUIRING
SURGICAL TREATMENT.

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(*Concluded from page 339.*)

A CIRCUMSCRIBED empyema, whether dependent on a limited pleurisy, a localised hæmothorax, or a local lung disease, or an actual perforation of the lung, from abscess, dilated bronchus, or gangrene, with or without pneumothorax, requires an exploratory puncture, followed by an open puncture or incision. The exact seat of the operation must of course be regulated by the position of the purulent or putrid collection, and the rule of choosing the fifth interspace near the front must be so far set aside. Even then, however, it should be remembered, that the diaphragm will ascend above the level of a low opening, and the drainage-tube may soon interfere with the desired union of the pleural surfaces. Pneumothorax is an especially serious complication of empyema; if slight, it opposes the expansion of the lung, and it may be accompanied, as in cases of gangrene, with decomposition of the pus; if again the air escapes in quantity through a pulmonary fistula without re-entering it, the lung may be almost completely emptied and become solidified. Hence an immediate and free opening is absolutely necessary wherever pneumothorax and empyema co-exist. In cases thus complicated operative proceedings afford, however, only partial and temporary relief.

But the complication most to be dreaded in sero-fibrinous effusion or in an empyema, the one which is most opposed to a cure in an otherwise curable case, and therefore the one most watchfully to be guarded against, is excessive and prolonged *compression* of the lung. If the re-expansion of the lung be not the most efficient agency by which the distended pleural cavity is filled up, after the evacuation of its contents, either by absorption or by operation, it is certainly the most desirable result which can be attained. The failure of the lung to become re-inflated is, at all events, a chief cause of the difficulty in again filling up the pleural cavity after it has been opened; whilst its re-inflation is a physiological condition essential to a satisfactory cure. Not only, therefore, as previously urged, must a large sero-fibrinous effusion into the pleura, which resists other treatment, be promptly relieved by aspiration, and any reaccumulation be similarly treated without delay, but no sero-purulent or purulent fluid should, in my opinion, be allowed to re-accumulate even once. The most intractable cases are those in which it has happened that large quantities of fluid, of whatever nature, have been drawn off; in other words, in which large quantities have been allowed to accumulate and perhaps remain for weeks in the chest. It is by the prompt adoption of the open treatment by puncture or incision that the serious complications of compressed or consolidated lung can with certainty be warded off. A lung merely compressed by an effusion for a short time only, but not inflamed, or bound down by adhesions, or clasped by membrane, can readmit air as the fluid is drawn off, the entrance of the air being determined by the ordinary inspiratory acts which take off atmospheric pressure from the walls and contents of the chest, or by deep inspirations, or by air being forced into the compressed lung from the sound one after closure of the glottis, or by the act of coughing. The breathing of compressed air, by the aid of special contrivances, has also been found to assist in the re-expansion of the lung. But if the compressed lung should be adherent either to the costal, diaphragmatic or mediastinal pleura, such adhesions may furnish additional mechanical means of drawing it out, and so expanding it, during inspiration. Hence the importance of promoting such contact between the lung and the adjacent walls of the pleural cavity as will permit of their progressive adhesion, and so indirectly, as well as directly, aid in the gradual occlusion of the pleural cavity.

Now, sometimes from the undue and prolonged compression of the lung, or from other local causes, such as perforation of the lung, or untoward contractions in the pleural cavity, or a too low position of the opening in the chest walls and consecutive irritation from a long drainage-tube, but sometimes from constitutional causes, such as the existence of phthisis, struma, or general debility, or from unfavourable hygienic surroundings, or from inadvertence, cases of chronic empyema arrive at a condition of standstill; the diaphragm ceases to ascend, the mediastinal wall no longer yields to the compensatory enlargement of the other lung, the costal wall does not collapse, nor the lung expand, the empyemic cavity remains patent, the thoracic fistula continues open, and more or less unhealthy pus escapes or has to be washed out daily. In such cases time, favourable surroundings, dietetic and medicinal treatment, general exercise, forced diaphragmatic and costal movements, and the inhalation of compressed air, may still do good; but it has been recently attempted by the removal of portions of one or more ribs to weaken the chest walls, favour their more rapid and effectual collapse, and so promote the closure of the pleural cavity. Such an operation deserves, *à priori*, a fair trial, for the grounds on which it has been suggested are reasonable; and, certainly, surgical interference cannot be applied either to the diaphragm or mediastinal wall, or to the lung itself, with similar intentions.

The operation of *resection of a rib* is not a new one; it is even mentioned by Celsus, as what surgical operation is not? and, as stated in my first lecture, it has been had recourse to for caries, necrosis, and tumours of the ribs; but its recommendation and performance in cases of empyema are novel. It has been done, however, with two different objects, first by Ewald (1876), Peitavy, Kœnig, and Wagner (1880), to secure a continuously free opening into the chest, in spite of the inevitable approximation of the ribs which takes place in the cure of old-standing empyema; and secondly, by Simon of Rostock, Howse (1877), Thomas, Elkington, Evans, and West, with the additional object of weakening the chest walls by removing the resistance offered by the ribs, and so facilitating the required obliteration of an empyemic cavity. In children, in whom the chest walls are comparatively weak and elastic, the removal of a portion of one rib, as shown by the success attending the operations recorded by Thomas, will often suffice to allow that cavity to collapse and the lung to re-expand; but in adults, the trephining of one rib, an operation I performed many years ago, or the removal of a portion of one rib, is insufficient for this end, and several ribs must be attacked.

After conferring with the physicians under whose care the patients had been placed in this hospital, I have recently removed portions of several ribs in three cases, whilst in a fourth I have performed what I believe is a new operation—viz., subcutaneous division of the costal cartilages, with the view also of weakening the thoracic walls and allowing them to fall in. I will relate the salient points only of those four cases, and show you three out of the four.

CASE 1. *Chronic empyema of three and a half years' duration before the operation.*—R. M——, aged thirty-four, under the care of Dr. Tatham. Four years before his admission, he had acute pleurisy, and was tapped in the third week, when more than half a gallon of clear fluid was drawn off; he was again tapped in the ninth week, and once again later, the fluid being less in quantity but darker. At the end of the fortieth week, he was punctured in the eighth left interspace, the fluid being then large in quantity and purulent. His condition continued almost unchanged for about three years—the discharge being from a half to three-quarters of a pint in the twenty-four hours. On admission (1880), two or three ounces of pus could be expelled from the chest, and the empyemic cavity held eight ounces of injection. Under treatment, the quantity of pus somewhat diminished, and the general strength improved; but the case being of very long standing, and no sensible advance seeming probable, portions of the seventh, eighth, and ninth ribs were removed, varying from one and a half to one and three quarters of an inch in length; and a large tube, four inches in length, was fixed in the dilated fistulous opening. This was done in May; and a week or so afterwards the cavity held only three or four ounces of

injection; the tube was now shortened, the discharge decreased, and, after some weeks, it ceased, and the tube was removed. On June 29th, he left the hospital with only a minute opening in his side, the chest flattened, the shoulder drooping, and the ribs getting firm again. So far there was decided benefit; but the sinus never quite closed; and three months later (Sept. 1880) the patient caught cold, the discharge returned, and, as Dr. Tatham hears, has since required evacuation twice a week, sometimes equalling half a tumblerful in that time, or about an ounce and a half daily. He has been out of sight for the last eighteen months, and, it is believed, without regular treatment.

CASE 2. *Chronic empyema of two and a half years' duration before the operation.*—J. B——, aged thirty, phthisical, under the care of Dr. Powell. Four years since, he had hæmoptysis, and for three years and a half, has had constant cough; three years ago, he was aspirated on the right side, four pints of pus being drawn off; thirty-six weeks afterwards, four pints more pus were withdrawn; eight weeks later, an incision was made in the ninth right interspace, and a drainage-tube has been worn in the opening ever since. On admission (June, 1881), there was flattening of the chest, sinking of the shoulder and the nipple, and hollowing of the axilla; the left lung came over to the right margin of the sternum. If the drainage-tube was withdrawn for two days twelve ounces of pus accumulated, six ounces being thus formed daily. In August, two inches and three-eighths of the ninth rib were resected; the opening in the soft parts was dilated, and numbers of flakes of lymph were, from time to time, washed out, but no great improvement was noticeable. Accordingly on Nov. 18th, 1881—that is, two years and ten months after the first evacuation of four pints of pus, and nearly two years after the incision and open drainage—from three-quarters of an inch to one inch of the eighth, seventh, and sixth ribs were removed, and a silver drainage-tube was inserted into the sinus. The discharge soon lessened in quantity down to about one ounce daily; there occurred a marked falling in of the chest walls, and the size of the empyemic cavity considerably diminished. Elastic pressure has been applied around the chest, and the improvement in the two months since the last operation is very marked. According to measurements taken, the affected side appears first to have fallen in, and then regained in dimensions; but the empyemic cavity is certainly smaller. Has the lung formed fresh diaphragmatic or other attachments, and become somewhat more expanded?

CASE 3. *Chronic traumatic empyema of one year and ten months' duration before the operation.*—W. M——, aged thirty-one, under the care of Dr. Pollock. Five years and one month since, he had fracture of the ribs, followed by pleurisy; six weeks later, the chest was incised at the right seventh interspace, and four pints of pus were evacuated. Since then, the sinus has remained open, except once for a week. On admission (Aug. 1881), the right chest was contracted, and the breath sounds were wanting in front, below the pectoral line. The sinus was dilated with laminaria; a cavity measuring, according to the probe, four inches upwards, two backwards, and two inwards, was found; four ounces and three-quarters of putrid pus escaped daily. At the end of two months, by the use of injections, the pus was reduced to two or three ounces daily, and was no longer fetid. The condition of the patient being now stationary (on Nov. 22nd, 1881),—that is, about one year and ten months after the first opening of the empyema,—portions varying in length from three-quarters of an inch to one inch and a half, of the ninth, eighth, seventh, and sixth ribs—namely, two ribs above and two below the sinus—were excised. The lower ribs were united and very difficult to resect; from the upper part of the wound there was exceptionally severe hæmorrhage, which was arrested by plugging. Below and in front of the line of resection, the ribs could be easily pressed in, and the diaphragm could be made thereby to ascend; a gutter-like depression, running obliquely upwards and forwards, was caused on the side of the chest. Since then a tube has been worn and red-wash injections used; and now, two months after the operation, the empyemic cavity has very much collapsed, a narrow sinus lined by granulations alone remaining; the discharge is reduced to less than two drachms daily; the right side of the thorax has contracted much further, but it exhibits increased movement; the breath sounds are heard somewhat further downwards, and the patient says he feels that more air enters the chest. Having already increased fourteen pounds in weight between his admission and the date of the operation, he has gained since the operation, ten additional pounds. In this case, also, there was apparently an increase of respiratory movement on the diseased side, associated with a marked collapse of the chest walls, suggesting the possibility of progressive adhesion of the lung, and its subjection to the expanding movements of the chest wall.

CASE 4. *Empyema of six months' duration before the operation.*—B. W——, aged thirty-five, phthisical (under the care of Dr. Williams). Two years since he had hæmoptysis, followed by cough, night sweats, and diarrhœa. On admission (Nov. 1880), he had signs of pleurisy; two weeks later, twelve ounces and a half of yellow fluid were aspirated from the right chest; about seven weeks and a half afterwards, fifty ounces of a similar fluid were removed in the same way; twelve weeks and a half later, one hundred and twelve ounces of sero-purulent fluid were aspirated; and three weeks and a half after that (May, 1880), fifty ounces of pus were evacuated by incision in the eighth interspace at the side; a counter-opening was made in the seventh interspace behind, and a drainage-tube was passed across from one opening to the other. After the lapse of fourteen weeks (in Sept.), the formation of pus, which just before the incision was at the rate of two ounces daily, gradually diminished, with occasional short intervals of occlusion of the sinuses, to less than one-third of an ounce daily; but in the next two months, in spite of great flattening of the chest and falling in of the side, accompanied with curvature of the spine and lowering of the shoulder, the case came to a standstill, with a large irregular empyemic cavity, which would not close. Accordingly (Nov. 2nd, 1881), that is, six months after the withdrawal of the sero-purulent fluid, the seventh, sixth, fifth, and fourth costal cartilages were divided subcutaneously about midway between the sternum and the anterior ends of the corresponding ribs, the two lower cartilages being divided through the same cutaneous wound. The operation was done antiseptically; and by means of a modified spinal apparatus with an elastic corset, unilateral pressure was subsequently brought to bear on that side of the chest. The section of the cartilages was made obliquely from behind forwards and outwards, with the idea of permitting the outer portions to slide backwards and inwards behind the inner portions; and this distinctly took place in the fourth cartilage, but the others moved chiefly backwards. The pressure of the elastic band, and even ordinary movement, occasioned much pain and inconvenience. A large drainage-tube, passing across from sinus to sinus, was at first employed; but after a time a tube was inserted in the lateral opening, only a few horsehairs being drawn through from that to the hinder sinus. The discharge now, ten weeks after the operation, is less, amounting to perhaps one drachm daily; but there is still a large cavity, and the progress is not so evident as in the three cases of resection of ribs.

The three last-mentioned patients are here before you. Some benefit has occurred in all, but most in the traumatic empyema, as might be expected from the absence of lung disease. The results, however, are not so favourable as in the cases recorded by Thomas in children. The remarkable change of form, which follows the resection of several ribs, can here be observed, the thorax on the diseased side falling in and assuming almost a V-shaped instead of a C-shaped horizontal section, as on the other side; thus, ◁○. Much less change occurred after the division of the costal cartilages. Tracings and measurements have been placed at my disposal by my colleagues and their clinical assistants, Messrs. Knowling, Finch, and Vise, referring to all these cases; but I find it difficult to draw any exact inference from them as to the changing capacity of the empyemic cavity, which is what we chiefly require to know. Both measurements and tracings vary, according to the method of the observer, the identity of the line of measurement at different times, the maintenance of the same position by the patient, and the state of muscular action and respiratory movements; they are also sensibly influenced by the state of nutrition of the soft parts. Moreover, compensatory changes in the sound side obscure the comparison between the two sides; and I certainly think that, after the resection of several ribs, there sometimes occurs a rotation of the whole thorax to the opposite side, causing a posterior vertical bulging of that side opposite the angles of the ribs. Neither do I believe that any moderate change in the capacity of a re-expanding lung could be detected by a spirometer, for an increase in the quantity of air drawn in and expelled might

be due to increased muscular power, or to practice in the use of the instrument, or to a continual compensatory expansion of the sound lung. Injecting the empyemic cavity by means of a syringe is open to the objection that the distending force or the resistance to it, as well as the state of the respiratory movements, may vary. The most reliable clinical data on this subject are derived from noting the daily quantities of pus, and making examinations of the cavity with a probe; but for the future, I propose to take the capacity of an empyemic cavity by allowing tepid antisepticised water to gravitate into it from a graduated bottle, furnished with an outlet pipe near the bottom, and fitted with a stopcock, an elastic tube, and a nozzle for adjustment to the opening in the chest walls, the patient being first placed in a horizontal position, with that opening uppermost. In this way, a practically uniform pressure may be employed, and any variations due to resistance or the respiratory movements may be eliminated.

In concluding these remarks on pleuritic effusions, and their management under different circumstances, it may be observed that in all three of the empyemic patients before you, and in the one not present, very large quantities of fluid had accumulated in the chest before the open treatment was adopted, so that the lung had been much compressed. Again, the fluid had been long retained, so that the lung had undergone a prolonged compression. Furthermore, the fluid being sero-purulent or purulent, the pulmonary pleura would probably be covered with false membrane, which would clasp the lung and interfere with its re-expansion. It is, I think, also important to note, that in no case was the chief opening in the chest made higher than in the seventh interspace, in two it was in the eighth, and in the remaining cases in the ninth. In all four instances, the diaphragm was found to have ascended above that opening; long drainage-tubes, accordingly, have intervened between the diaphragmatic and costal pleura; and, as I believe, by keeping up irritation have interfered with the desired contact and cohesion of those parts. In any future case in which the sinus in the chest wall is low down, I shall, after resecting the ribs, make a new opening for a shorter drainage-tube, just above the highest resected rib, or at least as high as the fifth interspace; I may possibly do this in the present cases. In all four cases, the gap in the chest wall has gradually become firm, and formation of new bone has taken place. This new bone is liable to become an obstacle to the introduction of the drainage-tube. In all four cases, a considerable reduction in the size of the empyemic cavity has followed the operation, and in two, the breathing appears to have improved. It remains for experience fully to justify the operation, and, if so, to teach us the number of ribs proper to be resected, what portion of each rib should be selected for the operation, and what lengths should be removed. I am of opinion that four ribs are not too many, that the sixth is an essential one to deal with, and that from one and a half to two inches of bone should be taken away.

[The lecturer concluded by a brief reference to diseased cavities in the lungs and inflammatory effusions into the pericardium, in reference to their possible surgical treatment. He showed a series of preparations relating to these subjects, as well as the instruments employed in aspiration, paracentesis, and resection of the ribs, including an ingenious double washing aspirator bottle, already mentioned as being the invention of Dr. Hicks. Dr. Philip Hensley has also invented an excellent apparatus for irrigating the pleural sac.]

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—From the report read at the annual meeting of the friends of this institution, held on Tuesday, it appeared that during the past year 24,436 (1582 in-patients, 22,854 out-patients) had received the benefits of the charity. The committee had been compelled to sell £1000 Consols to meet a deficiency of income, and were indebted to the bankers for a loan of £200. In replying to a vote of thanks accorded to the medical officers, Dr. Lawson took occasion to acknowledge the readiness with which the committee received any suggestion from the medical staff for the benefit of the patients.

IT is proposed to erect a convalescent hospital at Milford, near Stafford, as a memorial to the late "Sister Dora," so well known for her self-sacrificing labours in connexion with the Walsall Cottage Hospital.

Gulstonian Lectures
ON
PULMONARY CAVITIES; THEIR ORIGIN, GROWTH, AND REPAIR.

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LECTURE I.—PART I.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN, — The study of disease with the help of anatomy was the special object contemplated by the founder of these lectures, of whom we read that he was yet greater as a theologian than as a man of science. The well-known words of his bequest I need not repeat to you: they contain evidence of his scientific insight, and of his belief in the great future reserved for pathological anatomy; they prove also that his was a theology not opposed to the progress of science, but capable of rising above the prejudice of the hour in the practical search for truth. After two centuries, his objects in science are still our objects; and his enlightened theology may be set as an example singularly fitted for our own times.

This brief allusion to Dr. Goulston's original purpose will be my apology for inviting you to a study mainly anatomical and pathological. The pathology of pulmonary cavities has not hitherto been carried beyond an elementary stage; in the large works on phthisis it is treated in general terms, and almost exclusively from a clinical standpoint; and I have sought in vain for any important monograph on this subject. I shall have occasion, however, to refer to some valuable lectures on Pulmonary Excavation delivered by my colleagues, Dr. C. T. Williams (in 1873), Dr. Douglas Powell (in 1877), and Dr. Mitchell Bruce (in 1881). Some attempt at a systematic treatment of this subject is also made by Professor Rindfleisch in his article on Tuberculosis in von Ziemssen's *Cyclopædia;* and to the views of this observer I shall specially revert in the course of my lectures. This gap in a somewhat important branch of pathology, which it is my humble ambition to point out rather than to fill, has an explanation in the method usually adopted in the study of phthisis.

The word "phthisis" has too often been understood to apply to a single affection, rather than to a collection of varying types of disease. I doubt whether the attempt to bind together all forms of pulmonary consumption by the thread of tubercle, so readily traceable in most, if not in all, has assisted the advance of our knowledge. Our notions of tubercle have not gained in definiteness, and we are compelled to admit that the word "phthisis" has ceased to be free from ambiguity. Since the late debate on Consumption at Glasgow we have become conscious of widely divergent meanings attached to this term. "Phthisis," it cannot be too clearly understood, is but a name covering many conditions, in which destruction of lung-tissue is a common feature. Used in this local sense the term is convenient. But it possesses no place in a strictly pathological nomenclature of disease; and every attempt to study phthisis without due regard to its morphological varieties must end in failure.

The analytical method, which I believe to be indispensable in any investigation on phthisis, is equally required for a fruitful study of the destructive changes in the lung. Too little attention has hitherto been paid to the topography and to the anatomical relations of cavities. The lung has been regarded as a unit, and its excavation as a more or less constant quantity. I will not deny that the most persevering analysis has been carried into the depths of the pulmonary tissue; but too often the tube of the microscope appears to have obstructed the view of the coarser anatomy. My endeavour in these lectures will be to study the pulmonary lesions rather in the light which strikes the naked eye, and to attempt, as it were, their geography, appealing to the microscope in all matters of detail, but

relying mainly on the practical data furnished by the unaided senses.

The tendency to a formation of permanent air-containing cavities is peculiar to the lung, and obviously connected with the special structure and the ventilating function of the organ. The photograph which I place before you illustrates the production of a cavity from a gunshot wound. The patient was shot seven years ago through the middle of the left clavicle, and bled profusely from some large vessel. The lung, which was also wounded, became the seat of an aerial fistula and of apex-excavation. Although of healthy descent, and originally strong, the patient is following the usual declivity of phthisis, showing how much depends upon the position of the cavity, and, within given limits, how little upon its exact causation. In this case, at least, tubercle does not bear the original blame.

More usually excavation has its cause in disease. Bronchiectasis and emphysema, anatomically considered, may be said to occupy the borderland between physiological and pathological conditions, both being essentially the outcome of the dilatation of normal structures. The size of the air-spaces in emphysema is often so considerable, and they imply so much destruction of lung-tissue, that they virtually constitute cavities, although we prefer to term them bullæ, having regard to the thinness and to the elasticity of their walls. The latter features, together with their position along the fringes and their lung-like aspect, sufficiently warn us against any confusion with cavities of a different origin. However, if the bulla should become surrounded by a thickened pleura, and if obliteration of its bronchus should take place, and the gaseous contents be exchanged for fluid, a cyst-like cavity may result, which differs from the more habitual vomicæ, mainly in the limpidity of its contents and in the polish of its wall. Lebert, who describes in the lung the occurrence of serous cysts, refers them exclusively to ancient deposits of blood or of pus. Hydatids, which are not infrequently met with, and the very rare dermoid cysts, of which isolated examples have been recorded by Lebert, Wunderlich, Büchner, Collenberg, &c., also belong to the category of cystic cavities.

More common than the cavities which I have mentioned are those due to bronchiectasis, a disease at first not strictly speaking excavating, but fatally tending to the formation of vomicæ not distinguishable from those of phthisis. Bearing in mind this tendency, I have preserved, in my tables of pulmonary cavities, a few instances of this affection. But bronchiectasis is too wide a subject to receive in these lectures the discursive treatment it deserves. Abscess followed by cavity formation may result in the lung from a variety of causes, which I will not attempt to enumerate. Sarcomatous and cancerous deposits occasionally give rise to ulcerative excavation in the lung. In gangrene, the most rapidly destructive of our excavating diseases, the stage of excavation is commonly temporary; it is soon followed by a fatal termination, or by closure. When death occurs early, the cavity either presents the character of a putrid mortification, or possesses a secreting pyogenic membrane, which indicates a limitation of the necrotic process, as well as an effort at repair.

I have briefly enumerated the chief kinds of pulmonary excavation occurring from various causes; but the typical cavern which will claim the greater share of our attention is special to phthisis. It bears the impress of chronic inflammation, strikingly evidenced in the zone of tissue condensation by which it is surrounded, and in the pseudo-capsule which defines its outline. This is, however, but one variety of phthisical cavity—not, we must admit, the most common. It differs widely from the excavations of acute phthisis, and scarcely less does it differ from the ordinary pneumonic softenings. We are thus made conscious from the onset of the necessity for a preliminary *classification* of the varieties of phthisis if we would thoroughly appreciate the origin of excavation.

The great division between pneumonic and tubercular disease has not yet, to my belief, been superseded. In spite of the tendency of recent years to see in all phthisis the working of tubercle, a distinction is still upheld by some of the greatest authorities, who refuse to subscribe to the revived doctrine of Laennec that caseation is invariably due to a tubercular origin.

I. Of these two large groups, let us first take the pneumonic, which, clinically speaking, probably comprises the majority of phthisical cases. Its chief subclasses are: (1) alveolar catarrh and broncho-pneumonia; (2) catarrhal pneumonia; (3) caseous pneumonia. A glance at the annexed diagrams will show a general agreement between this classification and those of Buhl and of Virchow, the differences being mainly in the terms.

Classification according to Buhl.

- Superficial inflammation (in territory of pulmonary artery).
  - Fibrinous pneumonia.
  - Catarrhal pneumonia following upon catarrhal bronchitis.
- Deep inflammation (in territory of bronchial artery).
  - Peribronchitis.
  - Parenchymatous or desquamative pneumonia
    - 1. Consecutive desquamative pneumonia (induced by general diseases).
    - 2. Genuine desquamative pneumonia.
    - 3. Caseous pneumonia.

Classification according to Virchow.

1. Genuine fibrinous pneumonia.
2. Catarrhal pneumonia (subdivision, broncho-pneumonia).
3. Caseous pneumonia (catarrhal and fibrinous pneumonia combined).

I have purposely reduced the pneumonic group of phthisical affections to its simplest factors—alveolar catarrh, catarrhal pneumonia, and caseous pneumonia; not alluding for the present to acute purulent phthisis, to œdematous softening, nor to the important group specially connected with pulmonary hæmorrhage.

1. The affections included in my first subclass do not require any special comment. They are distinguished from all others by the moderate extent of the inflammation which usually terminates in recovery; and by the small proportion which the epithelial elements bear to the other cells filling the alveolus.

2. A radical difference, more obvious under the microscope than to the naked eye, exists between catarrhal pneumonia and the former group. Structurally, this is scarcely less marked than the difference between a transient cuticular desquamation and a dermatitis; the former implicating only the epithelial surface; the latter striking its worst blow at the vascular layers, wherefrom the reproduction of healthy epithelium depends. This peculiarity renders catarrhal pneumonia, in a local sense, insusceptible of recovery, and implies softening as its probable termination.

3. The separation of caseous pneumonia into a definite class appears to be thoroughly warranted, not only by its anatomy, but by its clinical bearings; and I am fortified in this view by the example of Virchow and of Buhl. The difference between catarrhal and caseous pneumonia is not alone one of intensity, but of kind. Whereas the morbid deposit in catarrhal pneumonia nearly exclusively consists of alveolar cells and of leucocytes, in caseous pneumonia it is largely made up of fibrin. In addition to this partly fibrinous character of the alveolar contents, it is common for fibrinous pneumonia to supervene independently upon the chronic inflammation; and the extent of the ultimate disorganisation will greatly depend upon the behaviour of this recent fibrin, which is sometimes reabsorbed, but more commonly is involved in the caseous destruction.

II. Perhaps the most strictly defined of all varieties of phthisis is the tubercular. I am not alluding to acute primary miliary tuberculosis; from an anatomical point of view this is not phthisis, and clinically it also occupies an independent position. I would rather refer to a special class, in which tubercle of tolerably pure type, occurring in groups, is present from an early date, and leads to the common symptoms and termination of phthisis. The arrangement of this grouped tubercle resembles roughly that of grapes hanging from a branch, and explains the term "racemose" and "bunchy," under which it is variously described. Whereas in catarrhal and caseous pneumonia the alveolar structures are primarily involved, in this variety the alveolus is rather encroached upon than originally affected. The bulk of the lung is usually free from disease, and its tissue of good spongy quality. The chest preserves a large size, seldom revealing to auscultation the extent of the mischief; the cavities for a long time are capable of slow development only, and often escape detection. With these anatomical features the etiology of the affection is in full harmony. The disease is very apt to attack those habitually exposed to irritating atmospheres, and the subjects of chronic or recurrent bronchial inflammation.

III. By far the largest number of fatal cases are attributable to a *mixed* type of disease, including the pneumonic element by the side of the tubercular. I cannot enter here on the arguments which render it probable that catarrhal pneumonia is the prime factor in the majority of these

instances, and that tubercle is superadded as an outcome of the phthisis. According to the proportion and to the distribution of the two elements, varieties ensue, both in respect of the clinical phenomena and of the anatomical appearances, too numerous for description.

Holding fast by this rough nomenclature, we shall be better able to discuss the mode of origin of cavities. To whatever form phthisis may be due, excavation is invariably preceded by *softening*. The softening in phthisis is purely a chemical action, over which the living tissue has no control; but, like other chemical processes, it is mainly influenced by the "conditions of the experiment." Our endeavour should be to become more familiar with these circumstantial factors, whereby the course and duration of the process are so variously determined.

The chemical nature of the decay is well shown by the selective action which it exercises upon the tissues. In ordinary catarrhal pneumonic softening, the last survivors are the elastic fibres; experimentally, they are also found to be the most indifferent to a contact with acids or alkalies. Here the ordinary methods of oxidation and the methods of softening are in perfect accord. From this usual type the putrefactive disorganisation of gangrene or of bronchiectasis is entirely distinct. In the latter diseases cavities have been shown by Filehne to contain in solution a substance which dissolves elastic tissue and coagulated albumen, but is inert with regard to the gelatine-forming substance of the connective tissues.

Among the circumstances which most modify the march of phthisical destruction should be mentioned the varying density of the deposit and the degree of moisture within and around it. The term *caseation*, which has been rather loosely used in connexion with a variety of changes, should be restricted to the dry and dense products from which the moistening influence of the atmosphere and blood irrigation are in a great measure excluded. In this state of dryness, caseous accumulations may long continue unaltered; but with the admission of air the caseum ripens, and the degenerative reactions ensue which within recent years have been chemically studied by Duclaux (*Comptes Rendus*, lxxxv, page 1171, 1877).

We should not, however, imagine that this complete absence of moisture is an early feature of caseous infiltration. The only morphological peculiarity of caseation, which consists in its extremely fine subdivision, is susceptible of being explained on a totally opposite assumption. Alveoli, in the stage of fully developed catarrhal pneumonia, are almost exclusively occupied by spherical cells, which we will admit to be the outcome of alveolar proliferation. I am aware that the epithelial nature of these cells has been denied by many; and that Senftleben professes to have settled all doubts on this point by the artificial production of the same appearance in pieces of lung, hardened in alcohol prior to their insertion into the peritoneal cavity of rabbits; but, with Buhl and Rindfleisch, I still hold by the alveolar origin of catarrhal products; and the diagram, which I have copied from a drawing by Dr. D. J. Hamilton, will show that the same view is taken by that distinguished observer. The differences in shape and general aspect between these swollen epithelial elements and the normal epithelium are very striking; most striking, however, are the differences in their relative size. The enormous development which these cells undergo is plainly due to imbibition, and presupposes abundant moisture, probably arising from collateral œdema. As they expand, the cell-walls become thinner; the contained pigment-particles more scattered; and the minute granulation which results in the swollen cellular substance may be compared to the fine chemical precipitates obtainable in diluted solutions. The swelling which I have described, whilst it fills the alveolus, tends ultimately to burst the individual cells, and to weld them into an homogeneous mass, in which the scattered pigment is the only surviving witness to earlier conditions. This explanation of the compactness of the deposit as due to a swelling from endosmosis appears to me more natural than the suggestion made by Dr. Hamilton, that the healthy lung, acting by its respiratory efforts upon the caseous material after the fashion of a cheese-press, expels from it the fluid constituents, and it supplements the statement made by Rindfleisch, that a spontaneous contraction takes place in the alveolar walls after effusion has occurred within them.

In pure caseous pneumonia the subsequent desiccative changes are carried out to perfection, owing to the complete stoppage of the supply of air and of blood; and the advent of excavation may be long delayed. Not so in many cases of catarrhal pneumonia of a low type, in which imperfect aeration persists side by side with an inveterate œdema. Here molecular breaking down occurs early, and partakes less of the nature of fatty degeneration than of a maceration, which is alike destructive of the deposit and of the tissue. Thus, contrary to the opinion expressed by Dr. Hamilton, I consider œdema capable of exercising a most dangerous influence on the course of epithelial inflammations. The combination of an extensive catarrhal pneumonia occurring in separate foci, with severe œdema, commonly leads to what may be roughly termed a "dissecting excavation" of the lung. If the process be tolerably acute and the softening rapid the fibro-elastic framework of the lung is completely emptied of its parenchyma, and the lobular septa alone remain.

This condition of excessive moisture need not result from low œdema; it sometimes is produced by a localised congestion. To this class probably belong many of the apex excavations. The apex catarrh, which runs a rapid course and breaks down under our observation without passing through a stage of complete consolidation, furnishes us with daily recurring instances of this mode of cavity formation, sometimes less disastrous than the rapidity of the softening might lead us to suspect. All observers agree in admitting that, *cæteris paribus*, the quicker and the more complete the softening the more favourable also will be the chances of recovery.

It is especially in these moister, least caseous, forms of catarrhal destruction that *elastic tissue* is most abundantly ejected. Even true caseation does not completely destroy elastic fibres; I have found them repeatedly in ancient pultaceous deposits, where all other elements were reduced to granular débris. The elastic structures, however, do not wholly escape the destructive influence of caseation; occasionally they are so much comminuted (probably as a result of the degeneration rather than of the original inflammation) that their recognition may become a matter of difficulty. Grancher, in his valuable article in the *Revue de Physiologie*, ascribes their fragmentation to a mechanical, rather than to a chemical, agency; the strength of elastic tissue lies in its suppleness; if stretched unfairly, and embedded in a hard and brittle mass, it loses its resisting power together with its pliancy. This fact is demonstrated by Grancher by means of paraffin injections of the lung. The toughness natural to the pulmonary tissue is, under these circumstances, completely abolished, and the lung becomes capable of fracture. Exactly similar conditions are present in caseous pneumonia, which is characterised by the stretching of the alveolar wall, and by the density of the infiltration; and under the microscope it is difficult to find in advanced caseation the markings of the alveoli, although the larger elastic tracts remain conspicuous.

These remarks will explain the true significance of a discovery of elastic fibres in the sputum; if present, they constitute proof positive of softening, but their absence does not furnish us with any negative evidence. With regard to fully formed cavities, I may anticipate further details, by stating that we do not habitually find any elastic sediments among their contents.

I propose, after these general observations, to enter upon a short description of the modes of excavation special to the leading varieties of phthisis.

Pulmonary cavities most commonly owe their existence to some form of *catarrhal pneumonia*. The ordinary type of the excavation is lobular. Even in larger cavities this lobular origin remains for a long time evidenced by the persistence of trabeculæ. The softening, which begins at a bronchial termination, gradually proceeds through the consolidated lobule as far as its fibrous boundaries, or it may even extend beyond the latter. But, sooner or later, the excavating process is interrupted by tissue reaction, and a barrier is formed which resists the further encroachment of the disease. This reactive inflammation is probably due to the irritation set up within the alveolar wall by the presence of foreign material, and especially of the products of disintegration.

Sections of the zone of irritation exhibit, under the microscope, the appearance of a sarcomatous or of a granulating tissue. Sprouting into the alveolar space, the new growth ultimately obliterates the air cells, the epithelium of which may for a time assume undue activity and a cuboidal shape;

but all alveolar character is finally lost, except in a few air sacs which had suffered collapse before they were reached by the infiltration. By degrees the young connective-tissue cells elongate into fibres, or become flattened into laminæ, and thus a fibrous zone may be formed, which, for a time, delays the forward march of the softening. Active lymphatic functions also belong to this layer; for in its fissures streaks of a finely granular substance, mixed with pigment particles, indicate the high road followed by absorption. A similar process takes place at the periphery of caseous nodular deposits, and of inflamed bronchioles.

Thus fibrosis, or its first stage, fibroid cell-growth, is inseparable from catarrhal softening; but it does not in every case lead to the formation of a distinct capsule. In a special class of cases a membrane is developed at the periphery of the deposit prior to excavation. I believe these clean-cut cavities, isolated from healthy lung-tissue by a simple membrane, to be usually the outcome of slow caseation (it will be hereafter shown that they may also originate as a late result of hæmoptysis). Should the bronchus of the district affected be rendered impervious, the degenerative process may ensue without any excavation. Increasing inspissation takes place in the deposit, owing to the gradual absorption of fluids and to the contraction of the membrane; and the latter becomes thicker and more fibrous, ultimately resembling a stout ring of hyaline cartilage. Such is the history of many an old broncho-pneumonia which has never culminated in open excavation. The tissue has been destroyed by caseation, but has never been expectorated; and its remains exhibit under the microscope the débris of cells and abundant elastic fibres.

This occlusion of the bronchus need not, however, be permanent. From a variety of causes, the slender barrier separating the caseum from the atmosphere may ultimately break down. Rindfleisch ingeniously attributes the laceration to the force of the inspiratory current; but it is referred by Dr. Douglas Powell rather to the expiratory cough-pressure. This is an important, because a very common, mode of excavation. The softening may have progressed slowly, but the cavity is formed *ex abrupto*, the physical signs of an empty space becoming suddenly developed after the expectoration of the caseous fluid. The rapidity of the process is one of the more favourable features in these cases.

When the healthy tissue-reaction (to which is due the formation of the pseudo-capsules of cavities) is absent or imperfect, as in cases presenting less consolidation than œdema, the invariable result is a wide-spreading destruction. The same consequence follows even in the presence of moderately firm consolidation, should the œdema happen to be great; of this we possess an instance in the catarrhal pneumonia of drunkards. But more commonly diffuse softening results from a variety of pneumonia, which has never reached consolidation, but remains in a state of congestive œdema. This condition, it will be observed, is but one step removed from alveolar catarrh. In the latter, the slight accumulation of cells within the alveolus, and the moderate œdema of the alveolar wall, may completely disappear under treatment. But if the œdema should become severe and inveterate, the power of epithelial proliferation and of vascular reaction is completely extinguished; and the obliteration of a vessel of moderate size will suffice to establish a progressive softening, for which there is no longer any check.

In *caseous pneumonia* the cavities are influenced by the special character of the inflammation. The consolidation, which I have elsewhere described, rivals in extent that of fibrinous pneumonia, whilst in density it greatly exceeds the latter. As in fibrinous pneumonia, so here, the air-cells are not only filled, but distended, with the products of inflammation. Whereas, however, in fibrinous pneumonia, exudation invades suddenly a tissue structurally healthy, in caseous pneumonia the onset is gradual; numerous lobules have been for varying periods in a state of catarrhal pneumonia, and the intervening tissue deeply altered by chronic irritation, when the finishing stroke is given by the effusion of fibrin into the diseased districts. Our diagnosis between the two affections, when the consolidation occurs at the base, will, therefore, mainly rest upon the history of the case, but its correctness can only be tested by subsequent events. In common fibrinous pneumonia the exudation, which consists of fibrin, of leucocytes, and of red blood-corpuscles, all readily liquefiable, clears up early and rapidly. The result is widely different in caseous pneumonia. The fibrin may be not inferior in quality, but it is mixed with cells of epithelioid type, the fatty degeneration of which is naturally slow, whilst the channels of absorption are blocked by cell-growth. Yet greater differences are found in the vascular conditions. The circulation in fibrinous pneumonia is, for a while, impaired by lateral pressure on the capillaries; but, in caseous pneumonia, the stoppage is permanent, and due to endothelial growth. This peculiarity is sufficiently well marked to establish a safe distinction between caseous disease and not only fibrinous pneumonia, but also the ordinary forms of catarrhal inflammation. The obliteration is not restricted to the capillaries, but attacks the larger vascular branches, cutting off all blood-supply to the districts involved. This blocking of the bloodvessels, which has been described by Friedländer, by Grancher, by Hamilton, and others, is well illustrated in the drawing which I submit to you. I cannot agree with the view that the softening in caseous pneumonia is determined by this obliterative arteritis. I hold that the latter is but an ascending change, that it is altogether secondary to the arrest of the circulation within the capillaries, and that it does not, therefore, possess the ordinary value of an arterial thrombosis.

Equally distinctive of caseous pneumonia is the obliteration of the bronchial tubes, a feature less important anatomically than as a valuable guide to a diagnosis between the two forms of basic pneumonia. Under the influence of the same deep-seated irritation which leads to obliteration of the bloodvessels, the bronchi become permanently plugged by their own secretion and by the irritative proliferation of their epithelium. The practical result of the plugging is a complete stoppage of the air traffic in the diseased region, and a loss of all auscultatory sounds. Instead of yielding bronchial respiration as in fibrinous consolidation, the lung is silent, whilst giving a percussion-note of absolute dulness. From this combination arises, even for the trained observer, a danger of mistaking caseous pneumonia for a pleurisy. The only physical sign establishing a distinction between these two conditions is the increase of vocal resonance in pneumonia, and its diminution in pleuritic effusion; but if the pneumonia be accompanied with thickening and œdema of the fibrous layers, the physician is deprived of this last diagnostic help. Hérard and Cornil relate cases in which the presence of pneumonia was veiled in the manner I have described; and a striking instance of the confusion to which I have alluded has come under my own notice.

I need not insist at length upon the mechanism of the process of excavation, upon the combination of liquefaction with that "dry crumbling" so characteristic of the disease. From the moment that softening has gained access to it the entire mass is at the mercy of purely chemical forces. Undermined in various directions, large blocks of dense tissue are loosened and cast into the cavity, where they suffer ultimate disintegration. The lung-tissue is destroyed, as it were, in its integrity; neither interlobular septa, elastic fibres, nor bronchi offer any lasting resistance to the softening; alone, the largest bloodvessels survive, thanks to their *vasa vasorum*, and to the great thickening of their coats, whilst the diseased tissue falls away from them, as it does from the thickened pleura, much as a ripe fruit is detached from the branch. Thus dissected by the softening the vessels may long remain sole occupants of the vomica.

From this brief description it would be easy to recognise the typical caseo-pneumonic excavation. The main features of these cavities are their size, which is often considerable, the anfractuous condition of their walls, and the persistence within them of large vascular trunks absolutely cleared of all tissue. An arrest of the excavating process short of the boundaries of caseation is absolutely impossible, but in some cases caseation is not stopped, even by the spongy tissue around. In constitutions weakened by intemperance, or undermined by kidney disease, the œdematised alveolar tissue falls an easy prey to the advance of softening, which may end in the transformation of a whole lobe, or even of the lung, into a huge vomica.

I have purposely drawn an extreme picture of this affection. In many instances, however, the extent and the intensity of the lesion are limited, so that it may become quite impossible to draw an absolute distinction between a catarrhal and a caseo-fibrinous consolidation. Again, in the less severe cases the slowness of the process and the occurrence of tissue-irritation, to which I have already alluded, favour the formation of a limiting membrane, which protects the lung against further damage.

In the common form of phthisis known as *tuberculo-*

pneumonic, owing to the diversity of the morbid conditions, it is difficult to describe any special type of excavation. The following varieties are included in this group :—

1. Limited inflammatory processes leading to a generalised tuberculosis.

2. Catarrhal phthisis followed by tubercular infection of a local character.

3. Tubercular phthisis from the first complicated with much inflammation, which often specially affects the peribronchial tissue.

The process of softening may similarly partake of the features of the tubercular, or of the catarrhal, or of the caseous varieties. Many of the excavations which will most engage our attention belong to this class; they need not, therefore, be further described at this stage of my subject.

In the *tubercular* variety of phthisis, characterised by the large size and spongy state of the lung, and by the presence of bunchy masses of pigmented fibroid tubercle, yielding a dry surface on section, excavation is a much less prominent feature than in the pneumonic forms. The cavities are often small; their peculiarities are chiefly those of the dense tubercular tissue in which they occur, a tissue where proneness to decay is often surpassed by the tendency to fibrosis. Their walls are thick, abruptly cut, and usually provided with a pseudo-capsule. Tubercular softening is, under normal circumstances, a very slow process, strictly localised, owing to the perfect isolation of the caseum at the centre of a fibrous capsule. Consequently, the work of repair progressing at the periphery is allowed time to prevent, or at least to check, any great extension of the cavities beyond the original tubercular deposit. These vomicæ, however, may occasionally attain a considerable size from a successive implication of neighbouring tubercular masses.

This part of my subject would be incomplete were I not to allude to the cavities found in *chronic pneumonia* and in *acute phthisis*. Neither of these forms, strictly speaking, belong to the groups I have hitherto discussed.

Chronic irritation of the bronchi complicated with pleuritic adhesions is at the root of the changes known as chronic pneumonia, which generally include irregular dilatation of the bronchi. Bronchiectasis in this variety is obviously secondary to the fibrosis; it is especially prone to degenerate into phthisical excavations. We are familiar, on the other hand, with a form of bronchiectasis where fibrosis is superadded as a consequence of the bronchial disease. I believe that these two conditions, although extremely different both in their origin and in their clinical history, have been frequently confounded. In respect of the chronic pneumonic form, I am prepared to adopt the able description given by Dr. D. J. Hamilton, and to refer the bronchiectatic dilatations to the fibrosis resulting in the interlobular tissue and in the pleura from the irritation of an inveterate bronchitis.

The pathology of acute phthisis is far from complete, but the connexion of the process with a purulent bronchitis of virulent type is generally admitted by the side of complications, sometimes more tubercular, and sometimes rather pneumonic. The cavities in this disease are barely worthy of the name of vomicæ, but resemble the sinuous burrowings of abscesses. This feature is illustrated in the diagram which I have borrowed from Hérard and Cornil's work on Phthisis. Softening is invariably accompanied with much redness, inflammation, and œdema. The excavating process thus derives considerable assistance from the friability of the neighbouring textures, and in the worst cases leads to an extensive tunnelling of the lung. The affection is distinguished by the great rapidity of the softening, by the formation of pus, and by the redness, often erysipelatous, of the bronchial membrane. In this variety of the disease, pneumothorax is often threatened as a consequence of the insidious march of the ulceration, and of the lack of interstitial reaction. Life, however, usually drops before this point is reached, and only at the autopsy do we recognise the multiplicity of the patient's dangers.

The rough sketch which I have endeavoured to give of some of the forms of excavating disease will convince you that, if attempted separately from a description of the respective pulmonary affections, a classification of cavities can possess but a limited value. For practical purposes, some such classification is, however, required; and its most appropriate basis is probably to be found in a description of the cavity walls.

In whichever process they may have originated, cavities pass through a *period of formation*, during which their walls consist of inflamed or necrosing tissue, incapable of prolonged vitality. Cruveilhier has described this stage under the term "geode." This, in the typical vomica, is but a state of transition, sooner or later to be succeeded by the development of a lining membrane, for the fibroid material thrown out for the protection of the lung becomes the wall of the cavity when the original consolidation has been softened and removed. The more quickly this change is completed, so much the more favourable will be the prospects of the case. Too frequently, however, owing to the progressive crumbling of caseous masses, and to the coalescence of neighbouring caverns or cavernules, a limiting membrane is slow to be developed, or is carried away by the rapidly advancing wave of destruction. This formation of large cavities by a progressive encroachment is clearly to be distinguished from the excavating process in caseous pneumonia, where large tracts having been simultaneously involved in consolidation and lost from the first for the purposes of respiration, disintegration may proceed to an extraordinary extent without entailing additional strain upon the system.

The absence of a limiting membrane in cavities usually implies that the excavating process is not completed; and that, actively or slowly, decay is progressing, laying bare successive strata of consolidation, and not infrequently exposing the calcified remains of earlier disease. The expectoration of chalky particles gives us a proof of tissue-destruction occurring in a fibrotic district, just as the detection of elastic fibres in the sputum points to the softening of a tissue where inflammatory changes bear a more recent date. In all these non-circumscribed cavities, the surrounding tissue is caseous, fibrotic, or pneumonic, and is doomed, wholly or in part, to destruction. The line of demarcation has not yet been drawn; and too often, as in surgical gangrene, it fails to be drawn before the powers of life are exhausted.

It is, however, in the *mature* cavities that centre our chief interest and our hopes of successful treatment. I would again refer to the vomicæ surrounded by well-defined capsules, and developed in the abrupt manner to which I have alluded. The wall of such a cavity usually presents internally a pyogenic lining, and externally it is provided with a substantial fibroid coat. Owing to the suddenness with which it is relieved from internal pressure, and to the spongy character of its environment, the capsule is placed under extremely favourable conditions for contraction. A large proportion of the healed cavities are to be included within this class. This happy termination does not, however, obtain in every case. The caseous abscess may fail to contract, and, after a varying period of suppuration, may assume the character of a chronic vomica.

I agree with Dr. Reginald E. Thompson in thinking that a large proportion of these well-defined encapsulated cavities take their origin in hæmorrhagic deposits. I shall have occasion elsewhere to insist upon the remarkable degree of fibrotic action set up at the periphery of the deposits of blood in the lung. It may be incidentally observed that, in simple hæmoptysis, this "reactive" fibrosis is carried out with the full energy of a tissue thoroughly healthy as yet; hence the abrupt transition, not elsewhere observed, of spongy tissue into a tough fibroid capsule. These capsules are in other respects sufficiently characterised by their pigmentation and by the radiating puckering which invariably occurs at their surface.

Whether originally caseous, tubercular, or hæmorrhagic, the cavities ultimately acquire denser walls, and the secretion becomes more free from solid débris. The following is roughly the aspect presented by a cavity in this stage. Internally, the surface is lined with a greyish *false membrane*, often of appreciable thickness, but in other cases, possessing little more substance than the bloom on a fresh fruit. In either case it is readily detached, and exposes a red layer, which constitutes the *inner* or *vascular* portion of the capsule, the outer portion of which is *purely fibrous*. The relative thickness of these three coats varies according to the age of the cavities and to the degree of irritation under which they may be placed.

1. *False membrane.*—Most cavities are for a time the seat of a suppuration, which gradually diminishes, and ultimately ceases, unless called into renewed existence by some fresh irritation. During this suppurative stage the innermost lining of the cavities presents pyogenic characters; but, at all other periods, it can more aptly be designated as a necrotic layer. If examined under the microscope it is found

to consist mainly of caseous particles and of decaying cells, and to be merely an exfoliation from the inner surface of the cavity wall. In this particular the wall of a vomica is comparable to the wall of the medullary cavity of bone, for it sheds its waste products internally, and acquires thickness from without.

2. *Fibro-vascular layers.*—The real gauge for the activity of a cavity is given in the state of the vascular layer, which, in irritative conditions, becomes extremely congested. The remarkable polish of this surface, and its uninterrupted continuity with the surface of the air-tube, have often deluded observers into mistaking the cavity for a bronchial dilatation. The smoothness, the firmness, the bright arterial hue are the same as naturally belong to the bronchial membrane; and had we trusted to the naked eye alone, we must have concluded, with some eminent observers, that, far from being rare, bronchiectasis is among our most common diseases. But the specific constituents of the bronchial tube are not continued into the cavity. The mucous membrane, with its epithelium and its characteristic limiting structure, is stretched for a short distance over the infundibular entrance into the cavity, but it is ultimately thinned away. Scattered islands of mucous membrane, it is true, may be noticed where outlying bronchi have been intersected by the cavity wall; and to the continued activity of these bronchial segments is doubtless to be ascribed a great proportion of the secretion commonly referred to the latter; from islands of this nature were probably obtained the cells which have been adduced as evidence of the bronchiectatic nature of cavities formed in tubercular tissue. With the progress of time the thickness of the vascular layer is gradually lessened, its exposed surface becomes more tolerant of irritation, and the secretion less abundant, whilst the fibrous membrane acquires increasing strength.

In comparatively rare instances the lining of the cavity becomes purely fibrous, and the space is ultimately encircled by a continuous layer of wavy fibres. The diagram which represents this somewhat unusual condition was taken from a case of chronic apex-cavity. More commonly the fibres are interrupted and intermixed with a varying proportion of vascular tissue; but, in all cases, this layer is in contact with a fibro-nuclear zone, which becomes denser and more fibrous on the cavity side, whilst its outer boundary is lost in the spongy substance. Invariably, also, lymphatic spaces are enclosed in the meshes of the fibrous layer; they are readily identified, owing to the pigment particles which they usually contain.

I would call attention incidentally to a peculiar appearance, not hitherto described, presented by cavities of old standing, which have reached the pleural boundary. In these I have often noticed a fine fasciculation, closely resembling the muscular coat of an intestine from which the peritoneum has been detached. The fasciculation appears to consist mainly of fibrous tissue; it is striking only in respect to the arrangement of the fibres, which is almost invariably horizontal. Having found the same appearance in the lining membrane of an empyema, I do not look upon this formation as special to pulmonary cavities, but more probably referable to the pleural membrane.

The chief features of the walls of cavities in phthisis are briefly the following:

1. Absence of protecting epithelium.
2. Gradual decay within, leading to the formation of a necrotic layer (pseudo-pyogenic).
3. Gradual fibroid growth from without, constituting the so-called capsule.

I have made it sufficiently clear that, by whichever process produced, the cavity membrane is never a separable entity, but a surface induration. Loose capsules have been described by Dr. Reginald E. Thompson as due to the retraction of a layer of blood which originally adhered to the cavity wall. For such an appearance I can conceive but two other explanations: either the loose capsules must be due to a pulmonary aneurism which has expanded into a cavity, and furnished it with an accurate internal lining; or we must imagine the unlikely event of the necrotic zone special to the cavity having been shed in its integrity, and in a layer of considerable thickness.

The eminently practical classification of cavities given by Dr. Douglas Powell in his book on Consumption (second edition, page 102), is based upon the pathological states of the cavity wall. Cavities are divided into four classes: (1) the recent; (2) the quiescent; (3) the secreting; (4) the active or ulcerous. As expressions of various phases of development and of morbid action, this nomenclature is complete, and it corresponds to equally well-defined clinical states.

From a different standpoint, that of anatomical description, I would propose, side by side with this useful division, the following classification of cavities:—

1. Cavities devoid of limiting membrane: in these excavation takes place by a crumbling in the dry variety, by a liquefaction in the moist variety. The usual type is the moist. Reaction is at a minimum, and disintegration often overtakes the fibroid zone before it has become a protection to the tissue.—*Special subvarieties: a.* Suppurative necrotic form, commonly present in acute phthisis, where it is apt to occasion pneumothorax. *b.* Simple liquefaction, apparently from soakage, most frequently witnessed in compressed devitalised tissues when attacked by œdema. *c.* Ichorous ulceration, observed in the rigid and sinuous burrowings of indurative chronic pneumonia.

2. Cavities possessing a distinct capsule in the midst of spongy lung tissue: excavation is due to limited caseous abscesses, frequently also to the softening of hæmorrhagic foci.

3. Chronic cavities with thick lining, continuous with more or less induration partly inflammatory, but chiefly due to collapse.

4. Chronic cavities with thick lining, surrounded by a rim of tubercle.

MULTIPLE SARCOMA, OR HODGKIN'S DISEASE.

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(*Concluded from p. 342.*)

RECORDED cases of lymphadenoma or Hodgkin's disease are not very numerous; but out of twenty-two which I have noticed, I find that the disease occurred in seventeen males and five females. This is scarcely a number large enough to enable us to draw conclusions from as to the liability of the sexes, any more than it is to the age at which it is most likely to occur, as may be seen from the subjoined. The ages of the females were six, thirteen, twenty-nine, thirty-four, forty; and that of the males, nine, ten, eighteen, twenty-three, twenty-four, twenty-four, twenty-four, twenty-seven, twenty-nine, thirty, thirty-four, thirty-seven, forty, fifty, fifty, fifty.

Nearly all writers upon the subject of Hodgkin's disease distinctly state that there is no increase in the number of the white corpuscles of the blood. Dr. Wilks says, "According to my own experience I have never met with well-marked leucocythæmia in Hodgkin's disease."[1] Anything approaching a leukæmia, therefore, does not exist, and this is also the opinion of Murchison and Trousseau. They have all recognised the fact of an altered state of the blood, but an alteration which partook more of the character of anæmia than leukæmia, and hence the name of "anæmia lymphatica" given to it in contradistinction to that of "leukæmia lymphatica," reserved for that condition in which there is an increase in the number of the white corpuscles of the blood associated with a general enlargement of the lymphatic glands. Dr. Murchison laid so much stress upon the fact of absence of an increase in the white corpuscles of the blood in Hodgkin's disease as almost to make it an essential element in the diagnosis. If this is to be the point upon which the diagnosis centres, then the case which I have reported must be removed from the class of Hodgkin's disease and be considered from its microscopic appearances simply one of multiple sarcoma—a name good enough in its way—if it can be shown that the characters of the disease are constant. To recapitulate: the condition of the blood was this. The white cells were increased in number and contained numerous bright glancing bodies; the coloured corpuscles had lost their disc-like form, and were of various sizes—some smaller, others larger than in health; they did not form rouleaux, but exhibited a very marked tendency to become fused together, so as to form a dirty brick-red mass of protoplasm. The loss of the power to form rouleaux and the varying size of the coloured corpuscles are features which

[1] Guy's Hospital Reports, Third Series, vol. xi.

have been already observed in the blood of patients suffering from "pernicious anæmia."

R. C—— suffered, as I should imagine all patients will when their blood undergoes important alterations, from a symptom which was most persistent, and one which was most difficult to treat—I refer to asthenia—a debility profound and unaccounted for by the condition of any of the organs observed during life. As it seems to have been a very prominent symptom in nearly all the cases which have been reported, we naturally consider it to be dependent upon the changes which the coloured corpuscles undergo; they seem to lose their capillarity and activity, and consequently become inefficient oxygen-carriers, and almost inert as agents in the production of the changes concerned in nutrition. It is just a question, too, as to how far these alterations in the blood have not contributed to the want of success which has followed operations for the removal of enlarged spleen. Death has so frequently followed this severe operation from what has been considered "shock," the patients have never rallied, probably from the fact that there has not been the development of that nerve-force which ensues on the interaction of healthy blood and nerve-tissue. Schiff's experiments on dogs were successful.

One of the points of interest in R. C——'s case is that there was an increase in the number of the white corpuscles of the blood. This, with the condition of the blood-forming organs found after death, naturally leads us to inquire as to its cause. It is true that the origin of blood-corpuscles in adults is still shrouded in mystery, but the spleen and lymphatic glands are supposed by all physiologists to be important factors in their production. The marrow of bones, too, has received credit for a share. With these facts we are all more or less familiar as well as with this, that simple enlargement of an organ is usually associated with an increase of its functional activity. Clinical reports on some cases of gland enlargement are confirmatory of this, notably one by my colleague, Dr. Philipson, in the *British Medical Journal*, May, 1875, wherein it is stated that "there was a considerable diminution of the red globules and an increase of the white." This condition of matters was found after death to have been associated with an enlargement of the spleen and lymphatic glands, an enlargement, however, which was proved microscopically to be simply due to an increase in their normal elements. In the case I have reported the spleen, it is stated, was enlarged, but we have to remember that the enlargement was due to the presence therein of five or six large nodules or new growths of a character quite different from the spleen. The real splenic tissue was deficient, and consequently the actual number of white corpuscles formed by the spleen, as spleen, must have been less than in health, unless we accept the view that the new growths themselves acted the part of contributors. Instead of a decrease, we had an increase—an increase associated no doubt with a general enlargement of the lymphatic glands, but an enlargement which was not simple, for in them, as in the spleen, there were new growths similar in structure to those which studded the trunk. Can the new growths then, as originating from the connective tissue, have taken on the hæmatoblastic function so ably advocated by Dr. Creighton in his paper on the Pathology of Sarcoma?[2] or are we to consider the relationship this, that owing to the destruction of splenic tissue, the white corpuscles have not been transformed by the spleen and lymphatic glands into coloured corpuscles? The state of the blood in "multiple sarcoma," then, is an increase of the colourless and a diminution and changed condition of its coloured corpuscles. This was the condition of the blood in Dr. Philipson's case of lymphæmia, and one I have been able to confirm by the use of Gowers' hæmacytometer, in the person of a woman who has just died from lymphadenoma.

To return to the starting-point of R. C——'s illness, we have the fact of an injury causing fracture of a metacarpal bone, and of the injury being followed by inflammation of the lymphatics and enlargement of the glands. There was the absorption of something from the wound which so acted upon the glands, predisposed presumably, that there was developed a condition of matters which only finds its equal in cancer, where the glands not only take on malignant action, but serve as foci for further constitutional infection. Long ago Virchow pointed out that simple irritation of gland-tissue would give rise to a leucocytosis which is recoverable from in most cases. We cannot help thinking, therefore, that in the case which I have reported there must have supervened in the gland changes other than those depending upon septic irritation, for the lymphatic elements which had joined the current of blood seemed to have acted as units of infection, judged by the multiplicity of tumours.

There is just one other point to which I would like to draw attention, and it is this—the brain after death was found to contain many tumours, the presence of which was unattended by symptoms during life. There was no paralysis, no impaired sensation, no ophthalmic changes. There was a slight tendency to stagger, but not more than is observed in all debilitated subjects who have been confined to bed. With the absence of symptoms on the one hand, we have on the other positive evidence of numerous foci of cerebral lesion. Behind the right optic thalamus, and about one centimetre in front of the corpora quadrigemina, there lay a nodule of the size of a small walnut—a nodule large enough surely to make its presence felt through *action at a distance* upon the neighbouring ganglia. In its situation it was a little posterior to the lesion found in a case described by Hughlings Jackson, quoted by Ferrier,[3] and in which the symptoms were "feebleness of movement on the left side, particularly in the left leg, great diminution of tactile sensation on the left side, impairment of smell, or at least of common sensibility, in the left nostril, doubtful diminution of taste on the left side of the tongue, doubtful diminution of hearing in the left ear, and, which is one of the most interesting features of the case, left hemiopia of both eyes, owing to paralysis of the right side of both retinæ." In addition to the above and other smaller tumours, a nodule of a centimetre and a half in length, which had undergone softening, occupied the left corpus striatum, and involved part of the lenticular nucleus. So long as the lenticular nucleus is undisturbed, I believe the corpus striatum may be in great part destroyed without there being any paralysis. Here, however, we have both, and no loss of muscular power. Now, the function of the corpora striata, according to Ferrier, is to reduce voluntary acts—acts at first begun under the influence of the will—to those of an automatic nature. Anything like their destruction therefore causes complete paralysis. I need not repeat that paralysis was absent in my patient. This apparent want of harmony between lesion and disturbance of function is no proof that all attempts to localise cerebral lesions are futile. On the contrary, it only confirms the view that so long as the fibres which descend from the convolutions or the connexions proper of the ganglionic cells with the peduncle remain intact, there may be destruction of part of the corpus striatum and its lenticular nucleus without the production of paralysis. Of this interruption we had no proof.

[2] Journ. of Anat. and Physiol., April, 1880.

[3] The Functions of the Brain, p. 244.

CASES IN COUNTRY PRACTICE.

By WM. PRATT, M.D. F.R.C.S.,
SURGEON TO THE MONTGOMERYSHIRE INFIRMARY.

(Concluded from p. 196, vol. ii., 1881.)

GLOSSITIS WITH ABSCESS AND HÆMORRHAGE.

T. J——, aged fifty-eight, a farmer, living about eight miles from Newtown, sent for me on Feb. 17th, 1881. There was, the messenger said, something the matter with his mouth. On paying my visit, I found the patient sitting by the fireside, unable to speak or even to open his mouth, and he could swallow only with much difficulty. He pointed to his mouth, and intimated that there was nothing wrong anywhere else. With much pain and some force I got the teeth separated a little, and found the tongue enormously swollen, especially on one side, indented all round with teeth-marks, very dirty, with a most offensive breath. The pulse was normal, and the temperature but very little above normal. It was an evident glossitis, for which I could discover no particular cause. I now got the mouth sufficiently open to allow me to scarify the organ freely, and made the patient wash it with abundance of warm water. The bleeding was profuse, but in a quarter of an hour the tongue was reduced in size, the patient could speak, and he professed himself much better. I now ordered hot poultices under the

chin, warm washings to the mouth, liquid food, and a purgative. Being of a thrifty disposition, the patient requested that I should not call again unless he should send for me. The next day his son called to say that his father was certainly no worse, but rather better. However, on Sunday, Feb. 20th, a neighbour arrived on horseback to fetch me in all haste, inasmuch as the patient was "just" dead. A vein, he said, had burst in the patient's mouth, and he was literally bleeding to death. When I reached the house I found the patient in bed, somewhat blanched but able to speak, his pulse beating well, though somewhat softer than before. I now learned that on the Friday evening previous something had burst in the patient's mouth, and discharged much stinking matter, to his infinite relief. He now thought himself all right, but on Saturday evening blood began to flow from his mouth, and it flowed more or less all Saturday night and Sunday morning. On opening the mouth, which was now effected without much difficulty, I found on the under surface of the tongue, and exactly on the line of the ranine artery, a large hole full of black clots, and smelling most offensively. Evidently a glossal abscess had formed and burst, and afterwards a venous radicle of some size had given way into its cavity and bled freely. I at once syringed the hole well with warm water till I got it as clean as possible. On applying a little pressure, some pus with a good deal of blood flowed out. I inserted a small plug of lint, dipped in a very watery solution of perchloride of iron, and directed it not to be disturbed until the morrow. The food to consist of good soup. Next day there had been no recurrence of the bleeding, and all was progressing satisfactorily. I syringed the mouth well out with diluted Condy's fluid till all was quite sweet, and I left orders that that should be done several times daily. There was no more bleeding. The tongue decreased in size daily, the power of taking solid food returned, and in a fortnight's time T. J—— called upon me, reported his health as perfect, and showed me his tongue, which, with the exception of a slight induration on its under surface, looked and felt quite normal.

ACCIDENT WITH A STRAW-CUTTING MACHINE.

E. J——, labourer, aged sixty, on the 16th February, 1881, was feeding a straw-cutting machine driven by steam, when his left hand was dragged below the knife, and four of his fingers were clean cut off a little above the first phalangeal joint. There was a good deal of bleeding, which was, however, stopped by cold water. The thumb was left untouched. When he was brought to me I considered that it would be very unwise to take off the finger stumps which remained, and leave only the palm. If the stumps of the fingers could be saved the hand would be of much use to him; without them but little. Besides, is it true that there is no flexion of the first phalanges if they be left on? That I question. Why should not the lumbricales and the interossei do a little flexion, even if the tendons of the large flexors retire within their sheaths and do no more work? At all events, I resolved to leave E. J—— his stumps. I accordingly put the patient under chloroform, cut off the jagged ends of bones, and utilised every morsel of skin for flaps, with the result that in a fortnight's time two stumps were quite healed up. From the other two portions of bone came away before a cure was effected, but in a little more than a month the whole four stumps were healed. The power of flexion is excellent, and the hand is very serviceable. The patient is left-handed, much to his joy, he can write and grasp nearly as well as ever.

ACETONÆMIA SIMULATING DRUNKENNESS.

On Wednesday, May 11th, 1881, about 10 P.M., I was requested to visit E. R——, just arrived in Newtown. On reaching the house where the patient was staying I found a young girl of about twenty-four years of age, pale and thin, in a semi-conscious state, breathing rapidly and noisily, with a small quick pulse. She was sitting in an arm-chair, and could answer questions, but confusedly and with difficulty.

The history given of her was as follows:—She had arrived here by the 4 P.M. train from Manchester. At the station she had a staggering gait and a confused manner, with saliva here and there on her clothes, and was considered by all who saw her to be drunk. She took the omnibus to the principal hotel, where she asked for a little brandy-and-water, which was supplied to her. In a short time she fell off her chair in the commercial room of the hotel in what seemed a kind of fit; she was then helped up to a bedroom, where she was very sick. All who saw her thought she was intoxicated. After remaining there about four hours she was requested to seek her relatives. She then left the hotel, with assistance, and was next seen sitting in a doorway. About 9 P.M. she was able to appeal to a woman, who came near, to take her in, saying that she was very ill, that she had been so for weeks, and that she had been told by a Manchester medical man that she was suffering from diabetes. The woman believed her story, took her in, and sent for a police officer, who managed to get at the names of her relatives. These, being communicated with, came to her at once and sent for me.

I found E. R—— in the condition described. She was not drunk, for there was no tremulousness of hands or tongue, no nonsense talked when she was roused to consciousness, and her countenance was not that of a drunkard. She was not apoplectic, for there was no paralysis. There was no history or appearance of injury. I thought it uræmia. I ordered her to be taken at once to her aunt's, about half a mile off. I accompanied her thither in the conveyance and saw her safe in bed. Even as I left the unconscious state was deepening.

Next morning, about 9 A.M., I again saw E. R——. She had passed a restless night, and was now almost quite unconscious, only answering "Yes" or "No" when shouted to. The pupils were dilated and the conjunctiva insensible; pulse 130, small; respiration rapid and noisy. On auscultation the lungs were found to be without disease, and the heart's sounds very clear and normal. In the night time she had passed urine very freely, and had got out of bed herself to do so. The urine contained about one-eighth of albumen, and was loaded with sugar. At 3 P.M. she was quite insensible; pulse feeble; extremities cold and dusky; respiration and pupils as before. She could still swallow, though quite unconsciously. At 7 P.M. she was *in articulo mortis*, and died comatose at 8 P.M., twenty-two hours after I first saw her.

My treatment consisted in surrounding the patient with external warmth, in giving milk with a little brandy, and in trying to act briskly on the bowels. No post-mortem was allowed, but an inquest was held, at which I gave the opinion that the patient had died of diabetes complicated with Bright's disease. I now think that I gave too much prominence in my thoughts to uræmia, being influenced by the seeming convulsion and severe vomiting in the hotel, together with the patient's paleness. From no convulsion taking place whilst the girl was under my care I doubt if any real convulsion ever did take place, and from the absence of all anasarca I am inclined to think that acetonæmia, and not uræmia, was the actual cause of death. Mr. Cullingworth of Owens College, Manchester, the gentleman who saw the patient in Manchester, kindly wrote to me, saying that he saw the patient for the first and only time on May 9th, and that he diagnosed diabetes, and ordered her home without delay. He afterwards heard that she was somewhat confused at the Manchester station on May 11th, when taking her ticket for Newtown. The coma was even then beginning. Mr. Cullingworth further writes that he has met with a somewhat similar case before, and directs attention to three papers on what he calls "diabetic coma" in preference to "acetonæmia." These, for the sake of further inquiry, may be here mentioned. They are: Southey, THE LANCET, Feb. 8th, 1879; Elliott of Hull, THE LANCET, March 22nd, 1879; "Acetonæmia," by B. Foster of Birmingham, *British Medical Journal*, Jan. 19th, 1878.

Diabetic coma, or acetonæmia, is a subject of the highest importance both to the physician and to the medical jurist. There is blood-poisoning in diabetes, ending in coma and death. What is the exact poison? Is there any antidote to it; or what is the proper treatment? There is a morbid state which to the uneducated exceedingly resembles drunkenness; and the general practitioner when henceforth called to a case of insensibility must bear in mind that it may be drunkenness, or uræmia, or apoplexy, or injury, or epilepsy, or diabetic coma. The last state is scarcely alluded to in our text-books of medicine. Bristowe certainly says that "not unfrequently the patient dies comatose. It must be added that diabetic patients bear fatigue, mental or bodily, very badly; and that at an advanced period of their disease they are apt, after such fatigue, to fall into a state of almost sudden collapse, from which they do not rally." That is all; and it is certainly not enough. In our text-books of forensic medicine it is not mentioned at all. In the last edition of

Guy and Ferrier, I cannot find a single paragraph upon the subject. In mentioning the symptoms, I find that I have omitted to allude to one—that is, the diabetic halitus, upon the absence of which in acetonæmia Dr. Southey has somewhat insisted. In E. R——'s case it was also quite absent.

Newtown, Montgomeryshire.

POISONING BY LEAD DICHROMATE.

BY R. C. SMITH, M.D., B.Sc. (PUBLIC HEALTH) EDIN.

ON February 12th, 1881, Mrs. B——, aged thirty, a weaver in a cotton-mill, came to me for advice and treatment. She had been unable to follow her work for the previous six weeks, and was suffering from great weakness, wandering pains in her limbs, and anæmia. Her gums showed well-marked signs of lead poisoning; there was no albumen in her urine. She attributed her illness to the inhalation of a yellow dust that was given off from the yarn in the process of weaving an orange-coloured cloth. She had always enjoyed good health before being engaged at this class of work. She gave as a reason that it was the coloured dust (lead dichromate) which had made her ill; that her fellow-workers when engaged at the same kind of work sooner or later sickened, and that there were many others at home ill from the same cause.

Mary C——, also a weaver at the same mill, applied for advice a few days after Mrs. B——, and had like her been engaged as a weaver of orange yarn. The blue line was very distinct. Her breath was offensive, and the skin and conjunctivæ of a distinctly yellow colour. There was no albumen or bile in the urine, nor had she any tenderness over the liver. She suffered from tormina and wandering pains over the body, and was very costive. Under treatment the yellowness of skin passed away, but the blue line remained long after other symptoms of lead poisoning had disappeared.

Jane C——, sister of the above, was visited by me at her own home on the same day. I found her also affected with lead poisoning. She appeared to be, at first sight, suffering from an acute attack of jaundice. Her skin and conjunctivæ were intensely yellow. There was obstinate sickness and purging of dark sap-green motions, probably stained with chromic oxide. The urine contained albumen with a trace of chromium, but no bile or lead. This patient recovered with great difficulty; the staining of the tissues, sickness, and purging ceasing first, but the blue line is still present.

The above are types of cases that were of constant occurrence nine months ago, in the practices of medical men in the neighbourhood of the mill in question. I had eight cases at once under my treatment from the same mill for this peculiar form of lead poisoning. Another medical man has had twenty, and a third has had from thirty to forty similar cases in all under observation. One of the mill hands, under the care of a fourth medical man, dying from lead poisoning resulted in an inquest, when at the post-mortem ordered by the coroner the surgeon found distinct traces of lead in the liver. Public opinion having been thus drawn to the dangerous nature of the work, pressure was brought to bear on the employers, who have since then caused the yarn to be more carefully dyed and prepared before being woven. They have also insisted on the winders and weavers wearing a muslin respirator over the mouth and nose when at work, and the use of hooks instead of sucking with the mouth the yarn through the eye of the shuttle. By these precautions having been rigorously carried out, the operatives, though still weaving chromes, no longer suffer from lead poisoning. A microscopic examination of the fibres of the cloth made from the yarn which I obtained from the manufacturers, shows minute crystals of the orange chrome adhering to the outside of the filaments, as well as others still more minute within the tubule and in the interspaces of the cortex. The crystals on the surface are easily washed away by trituration with water and settle at the bottom of the washing, whence, if collected and fused with nitre and carbonate of soda, the characteristically yellow chromate of soda is produced. Ammonium sulphide blackens the crystals at once.

In the cases which I have observed, the yellowness of the skin is the first symptom to disappear, and the blue gums the last; chromium exists in the urine, and most probably in the fæces. I therefore conclude that after absorption the dichromate undergoes decomposition in the blood, the lead being fixed in the tissue, whilst the chromic acid combines with soda, a compound which is intensely yellow and stains the liquor sanguinis and skin for a time, and finally leaves the body by the liver and kidneys.

Arlwick.

CASE OF EXTERNAL BILIARY FISTULA.

BY J. MACKENZIE BOOTH, M.A., M.B. ABERD.

THE following case, which recently came under my observation, is, by reason of its somewhat rare occurrence, worthy of being recorded.

The patient, a lady aged seventy-seven, had for ten years suffered from well-marked attacks of hepatic colic; and, until three years ago, these occurred at intervals of a few weeks. Towards the end of September, 1878, I attended her during an unusually severe attack, which lasted for several days. The attack was accompanied by retching and jaundice, but, though the stools were repeatedly searched, no gall-stones were found. Since then she has been entirely free from these seizures, only complaining from time to time of slight pain or uneasiness in the right hypochondrium. In June, 1881, a painful swelling appeared on the right side, which remained some time before it became red and burst, giving exit to a scanty yellowish discharge. Save its persistence, she noticed nothing unusual, until, one night towards the end of December, while preparing to retire, she discovered a hard black point protruding from the orifice of the wound. As it hurt her on being touched, she had recourse to a hair-pin, with which, after one or two vain attempts, she succeeded in dislodging a hard black body about the size of a large pea. Next day two concretions of a similar size were passed.

On calling, I found the objects to be medium-sized gall-stones, about a quarter of an inch in diameter. On examination of the abdomen, a depression of the integument was noted round a small wound about a quarter of an inch in breadth, situated on the right side, nearly midway between the umbilicus and the crest of the ilium. A thick indurated band of about an inch in breadth could be felt deeply through the abdominal wall, passing up towards the gall-bladder until it was lost over the site of that organ at the margin of the costal cartilage. A scanty sero-purulent discharge slightly tinged with bile continued to ooze from the opening. Several more gall-stones have since been extruded, varying in size from that of a millet-seed to that of a pea. Further than this there is nothing worthy of remark, save that the formation of the fistula and the appearance of the calculi explain the abrupt leave-taking (now three years since) of the patient's periodic and painful visitant.

Aberdeen.

NOTE ON THE

TREATMENT OF ACUTE TONSILLITIS BY SALICYLATE OF SODA.

BY JOSEPH W. HUNT, M.D., B.S. LOND.

WHILE the treatment of rheumatic fever by salicin and salicylate of soda is under discussion in the pages of THE LANCET it may be well to notice the effect of the same drugs in an allied disease. The close connexion which has long been recognised between rheumatism and certain forms of tonsillitis induced me to try this remedy, and the results have been most favourable. In my hands it has acted almost as a specific in acute tonsillitis. Provided that there is no actual formation of pus, most decided relief is afforded in about twenty-four hours—i.e., the swelling and angry-looking condition of the tonsils are reduced, pain diminished, and the patient can swallow with comfort, while the temperature becomes normal and the pulse is reduced in frequency and improved in quality. Since I have used this drug I have had no single case go on to suppuration; nay, more, where it has appeared, from the state of the tonsils and the brawny and infiltrated condition of neighbouring parts,

that suppuration must ensue, it has been arrested by this treatment. The doses used have been fifteen grains every four hours for an adult, and about ten grains every four hours for a child. I have met with no unpleasant symptoms from its use, beyond a little tinnitus and occasional vertigo. When the brunt of the attack has fallen upon one tonsil, a relapse in the other, when the salicylate has been discontinued, is not uncommon, but this speedily yields to the same treatment. One or two medical friends, who have used the salicylate at my suggestion, have expressed themselves in equally favourable terms. As one said, "they get well too quickly."

Dalston, E.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

TUMOUR OF TESTIS; EXTIRPATION; RECOVERY; REMARKS.

(Under the care of Mr. BELLAMY.)

FOR the notes of the following case we are indebted to Mr. Dodson, dresser.

T. P——, aged thirty-three, a horsekeeper, married, was admitted to the Albert Edward ward on Dec. 12th, 1881. Eighteen months before his left testicle began gradually to enlarge and continued doing so until a month before admission, when it had attained the size of a cocoa-nut. It then enlarged very rapidly and became softer. From the first the testicle was the seat of sharp, stabbing, lancinating pains, the intervals between the sharp pains being occupied by a heavy, wearying, aching pain. He had never, so far as he could remember, received a blow on the testicle and could not account in any way for its enlargement. He had always been fairly healthy, and had never had syphilis or gonorrhœa, and had always led a steady life. His father was alive and healthy; his mother died of "the rupture of a bloodvessel." No history of carcinoma, phthisis, or other disease in the family.

Of late the patient had been losing flesh, though, on admission, he looked fairly healthy. His left testis was enlarged to about the size of an ostrich's egg, the growth measuring eleven inches and three-quarters in circumference. The enlargement was slightly irregular, and presented points of different consistence on its surface, in some parts being quite hard, in others soft and semi-fluctuating. It was exceedingly heavy, and the cord was enlarged and tender to the touch. The iliac glands along the vessels did not appear to be affected. The scrotal veins were enlarged and tortuous, and the skin in places was shiny and smooth. The patient was not cachectic.

On Dec 12th Mr. Bellamy selected one of the fluctuating points and introduced a trocar and cannula, but with negative results. On the 15th, the patient being under the influence of ether, Mr. Bellamy removed the testicle by an incision extending almost from the internal abdominal ring to the lowest part of the scrotum on the left side. The scrotal tissues, which were very adherent to the tumour, were carefully dissected off, and the cord separated from the surrounding parts. A strong ligature was passed round the cord, and then while an assistant pulled on this ligature a second thread was passed through the cord a little higher up. The testicle was removed by dividing the cord between the two ligatures. As, however, the disease extended quite up to the point of ligature on the cord, Mr. Bellamy deemed it advisable to apply another higher up. This was done, after enlarging the incision quite to the internal abdominal ring. The tumour was now removed, and the ends of the ligature left out of the wound. During the operation there was considerable hæmorrhage from small vessels, which were tied. The scrotum (a portion of which being apparently implicated in the disease was removed) was washed out thoroughly with a solution of carbolic acid (1 in 20), a drainage-tube inserted, and the edges of the wound brought together with wire sutures, and dressed with carbolic lotion.—16th: Dressed to-day; wound looks well. Temperature 101·1°. Passed a fairly good night; not in much pain.—17th: Dressed; pain decreasing. Morning temperature, 100·2°; evening, 102°. Being troubled with constipation, he was ordered a pill composed of ten grains of calomel with colocynth at bedtime.—18th: Does not feel quite so well to-day; two or three of the sutures causing irritation were removed this morning; edges of wound have a tendency to slough. Morning temperature, 102°; evening, 102·4°.—19th: Linseed poultices applied to remove slough; feels better. Morning temperature, 100·8°; evening, 101·5°.—21st: The edges of the wound now look much better; the poultices were discontinued; dressed with carbolic lotion. Morning temperature, 100°; evening, 100°.—25th: Going on well; wound healing in centre; slight purulent discharge from upper part. Morning temperature, 98·2°; evening, 100°.—28th: Ligature of cord came away this morning with dressing; pain entirely ceased. Morning temperature, 98·4°; evening, 99°.—31st: Wound healing nicely; discharge gradually becoming less; patient looks and feels much better. Morning temperature, 99°; evening, 99°.

Jan. 5th, 1882: Going on well. Morning temperature, 98°; evening, 98°.—11th: Carbolic dressing changed for more stimulating red lotion; wound has healed, except for a triangular space at the root of penis.—15th: Triangular space is now covered with healthy granulations; a small lump about the size of an almond can now be felt beneath the skin of the scrotum; it gives no pain on pressure.—21st: Lump increasing slowly, but still painless. Temperature normal.

A microscopical examination of the tumour showed it to be a round-celled sarcoma.

Remarks.—Mr. Bellamy remarked, in the course of some clinical observations on disease of the testicle, that in this instance the removal of the gland was not so easy as is generally the case. In the first place, the scrotal tissues were firmly adherent to the anterior surface of the tumour, and therefore a departure from the ordinary linear incision was necessary, in the form of an ovoid one, clear of such adherence. After isolation the mass was found to be immensely heavy (a factor in diagnosing), and the cord had to be exposed by free incision of the abdominal parietes. The small intestine bulged freely on either side of the cord, and, of course, the greater peritoneal sac was opened. Mr. Bellamy thinks it better, if possible, to treat the cord in castration as a stump of an amputation, and to tie each vessel as it bleeds, the control of the cord being maintained by vulsellum forceps, a general ligature of all the tissues frequently giving rise to a troublesome neuralgia. With regard to "palpation" of the iliac region, Mr. Bellamy observed how frequently this important aid to diagnosis of testicular growths was disregarded, and an operation either decided upon or given up on mere inspection. No spray was used, but the exposed gut and cord were well treated with 1 in 20 carbolic solution, and the temperature chart never went above 102°.

GLASGOW ROYAL INFIRMARY.

INTERMITTENT FEVER TREATED BY HYPODERMIC INJECTIONS OF QUININE.

(Under the care of Professor CHARTERIS.)

FOR the following notes we are indebted to Dr. P. A. Smith, house-physician.

Peter Q——, a sailor, aged thirty-two, was admitted on the 13th December, 1881. He stated that his present illness (fever) commenced three months before, when he was in the East India ports, and that it came on suddenly with cold and subsequent shivering, which continued for about a quarter of an hour, and was immediately followed by a stage of fever which lasted for a couple of hours. After the expiry of this period there followed a profuse perspiration, "his whole body being bathed in sweat." Afterwards the patient felt quite well, but on the following day at the same time there supervened the same sequelæ of (1) cold, (2) hot, and (3) sweating stage. On admission, in addition to these symptoms of fever, he showed traces of scurvy, which he said

became apparent on his homeward voyage, and manifested themselves by small isolated blotches on the legs, which were swollen and glazed, and by the condition of the gums, tender and elevated. The condition of the patient on admission, when his own statements were verified by careful observation, was that of "continuous quotidian fever and scurvy."

On the 14th, the day after his admission, it was deemed advisable to test the statements he had made as to his febrile condition by allowing him to remain in bed and giving him no medicine. At 8.45 A.M. he felt cold, and at 9 A.M., the hour of the hospital visit, his temperature indicated 102° F. in the axilla, and at 11 A.M. mounted to 104°, after which there was a gradual decrease every half hour until 1 P.M., the chart standing at 103°, 102·4°, 101·8°, and at the last-mentioned hour 100·4°. He was ordered to have a hypodermic injection of quinine at 8 P.M. of six grains, and this was to be repeated at 8 A.M. on the following morning. On the 15th it was stated that he had had the injections at the time mentioned, and he passed freely and without fever through the usual time of having the paroxysm. There was no increase of temperature and no uneasiness, and he says "this is the first time he has been free from fever for the last three months." The injection was ordered to be repeated at the same hour in the morning and the evening. He had two injections at the same hours on the two following days. On the 17th it was noted that the arm where the injections were given was somewhat tender, and the quinine was taken by the mouth dissolved in tartaric acid, and this mixture was continued in diminished doses for the next fourteen days. His progress afterwards was perfectly satisfactory. He daily gained in strength, and left three weeks after admission in excellent spirits. No slough or abscess marked the site of the injections, and the pain experienced at the time of injection was slight and soon passed away.

STANLEY HOSPITAL, LIVERPOOL.

FRACTURE OF LOWER JAW; NECROSIS; WIRED.

(Under the care of Mr. SHELDON.)

FOR the following notes we are indebted to Mr. Robert Jones, senior assistant-surgeon.

George S——, aged five years, was admitted into the hospital on July 20th, 1881, suffering from a fracture of the lower jaw. The fracture, a compound one, was situated between the right canine and bicuspid teeth. Treatment at first consisted in adapting the fractured ends by means of wire attached to the teeth. This, however, proved futile, owing to the wire, which was too thin, breaking. A four-tailed bandage was then tied, but the lad, being of a restless disposition, continually succeeded in displacing the fractured ends, until a large piece of bone, three-quarters of an inch wide and an inch in length, constituting one of the fractured ends, necrosed. It was now impossible to keep the jaw in good position by ordinary methods, so a fresh operation was decided on.

On August 19th the lad was anæsthetised and Thomas' operation of wiring performed. This consists in first extracting any loose teeth situated at the seat of fracture, and then drilling the jaw on both sides of the fracture, introducing silver wire from the outer side into one of the newly drilled openings, and out through the other. The fractured ends are then drawn together and two simple coils, so arranged as to admit of easy tightening, left between the cheek and gums. Three weeks elapsed and still there was no attempt at union, and in a few days an abscess pointed beneath the chin, which required an incision. On Oct. 26th he was made an out-patient; the abscess healed, but, withal, no union. On Nov. 12th the coils were undone, without extracting the wire, for the purpose of separating the fractured ends and rasping their edges. This accomplished, the coils were once more tightened so as to place the fractured ends in apposition. In three weeks more union was complete and the wire removed.

During the whole of this treatment the little patient was permitted to talk and walk when and where he wished. While in hospital his diet was limited to liquids, and his relatives, when the child was made an out-patient, were urged to continue the same precautions. After the last operation, however, his mother confessed to his having done justice to the family meals from the third day after wiring to the date of recovery. During the uniting process it is necessary to tighten the slackening wire about once a week—a very easily performed task, and one in no way painful to the patient. In this case the only deformity is the unavoidable one of a protruding upper jaw, due to the loss of bone from the inferior maxilla.

By the ordinary methods it was quite impossible to keep the jaw in line after necrosis caused so large a gap. Even were other conditions more favourable, the restless disposition of the child was an active reason for continual displacement. The fact that in three days after the last wiring he was able to masticate potatoes and even bread, bears ample testimony to the effectual mode in which by this method the fractured ends can be guarded against movement. The operation itself is comparatively a painless one—an anæsthetic being rarely required—and generally speaking no difficulty is experienced in its accomplishment. It ensures better adaptation, and a less easily disturbed one than other methods, besides affording the patient very much more liberty, and securing him against the hideous display of drapery, inseparable from most other appliances. To those desirous of immediately attending their usual avocations this is distinctly a consideration.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

THE annual meeting was held on Wednesday, March 1st, 1882, at 5.30 P.M., Andrew Whyte Barclay, M.D., F.R.C.P., President, in the chair.

The PRESIDENT on taking the chair declared the ballot open, and nominated Dr. Silver and Mr. Gaut as scrutineers. The report of the President and Council was read by the secretary, Mr. BERKELEY HILL, and contained the usual statements as to the condition, financially and numerically, of the Society. The balance-sheet was taken as read, and the report gave an analysis of its contents. It referred to the prosperity of the Society, as illustrated by the increase of its Fellows, the total number having increased in the year from 686 to 697. The number of deaths had been seventeen, four resident, ten non-resident, and three honorary. There had been twenty-nine new Fellows—twenty-one resident and eight non-resident. The favourable increase in the number of subscriptions, which commenced a few years ago, continued, and the members were nine more than those of last year. The increase in receipts from this cause, and a somewhat smaller expenditure, had allowed the Society to clear off a debt of £70 in last year's balance-sheet, and retain in hand a balance of £107. There was a probability, however, of repairs connected with the Society's house being required during the ensuing year, which would form a heavy charge on next year's income. The report also referred to the Harvey Tercentenary Memorial Fund, the subscriptions to which still remained an unsettled question; and also to the quinquennial Marshall Hall Prize, which would be a second time awarded in 1883. The increase of the library, either by donation or purchase, was much the same as usual.

The adoption of the report was moved by Mr. SPENCER WELLS, seconded by Dr. ABERCROMBIE, and carried.

The alteration of the by-laws affecting the title of the resident officers of the Society was put from the chair, seconded by Dr. SIEVEKING, one of the honorary librarians, and carried unanimously.

Mr. EASTES rose to ask a question as to whether the subscription to the Harvey Tercentenary Memorial Fund would be paid, which gave rise to a discussion in which the President explained the position of the Council and treasurer after a legal opinion was obtained from the Society's counsel of the illegality of such payment, the charter and by-laws not allowing the Society's funds to be used for any purposes beyond those for which the Society was instituted.

Mr. HOLMES proposed that as the Society was in a manner compromised by the votes of its two annual meetings, which could not be legally carried out, the Council and such Fellows as were interested in the question should subscribe individually to make up the required amount.

Mr. CHARLES HAWKINS agreed with Mr. Holmes, and added that the payment of the Society's money for objects which might be considered as including gifts to some of its Fellows, would lay it open to claims for legal dues, from which, by Lord Brougham's Act, they were relieved.

Dr. SIEVEKING seconded Mr. Holmes' motion for a subscription by Fellows; but on Mr. Cooper Forster pointing out that such a course would require a second special meeting within fourteen days to confirm it, Mr. Holmes withdrew his motion, and left the question as a recommendation for the Council.

The PRESIDENT then addressed the meeting. He commenced by alluding to the evidence of the increasing prosperity of the Society which the report afforded, and said nothing, in his view, could be more gratifying to a retiring president than the being able to speak in such terms to the Fellows; for no institution could be considered effete which could point to so large an addition to its roll as that which had occurred during the past year. He had, however, to record a large number of deaths among the senior and junior Fellows, among those who had left their mark on the world's history, and others who had quietly and unobtrusively done their duty towards their fellow men. The names of the deceased Fellows, of whom the President gave many interesting notices and details, were: Mr. Hammett Hailey of Newport Pagnell, Dr. Francis Richard Philp, late Physician to St. Luke's Hospital; Mr. Thomas Heckstall Smith of St. Mary Cray, Dr. Randle Wilbraham Falconer of Bath, Mr. William Donald Napier, Surgeon-Major Fitzgerald, Mr. George Leighton Wood of Bath, Mr. James Luke, Dr. Julius Charles William Heyn, Dr. Archibald Billing, Mr. Frederick Symonds of Oxford, Dr. Andrew Wood Baird, Mr. George Macilwain, and Mr. George Samuel Jenks. The three hon. Fellows whose loss the Society had to deplore were Dr. Nicolaus Pirogoff, Professor of Surgery at the Medico-Chirurgical Academy of St. Petersburg; Dr. Theodor Schwann, Professor at the Royal University of Liège; and Sir Robert Christison, Bart, M.D., of Edinburgh. In concluding his remarks, the President said that on retiring from the duties of office at an early date he had been influenced by one consideration, which he felt to be for the best interests of the Society. There were many names on the list of Fellows who ought at one time or other to represent the Society as its President, who would perhaps be excluded by mere seniority, but who, had their turn come a little sooner, would probably have welcomed the distinction and thrown themselves heartily into the work. In reply to some recent criticisms on the condition of the Society, the President remarked that this Society was founded on principles which are too well known to need vindication. If, said he, all the sparkling novelties which glitter in the sunshine of ephemeral notoriety are carried elsewhere, it was because we all desire that our Transactions should maintain a high standard of excellence. He referred to the question of amalgamation of the leading Societies into one comprehensive association, which had been noticed in his predecessor's address, and again mentioned at intervals in the medical journals. The President concluded by again thanking the meeting for the honour which had been done him by his election to the Presidency, and hoped the Royal Medical and Chirurgical Society would still flourish as one of the centres for the diffusion of scientific truth.

A vote of thanks to the President was proposed by Mr. CHARLES HAWKINS for his conduct in the chair, alluding in laudatory terms to his address, and agreeing with the suggested amalgamation of the Societies, a subject which he himself had carried a resolution in favour of as long as twenty-one years ago. Mr. KIALLMARK seconded the motion, which was carried with acclamation.

A vote of thanks was also given to the retiring vice-presidents and other members of Council, which was proposed by Dr. GRAHAM BALFOUR, and seconded by Dr. JOHN HARLEY.

The scrutineers reported the result of the ballot, and the list of officers for the year 1882-83, which was published in our impression of the 25th ult.

PATHOLOGICAL SOCIETY OF LONDON.

Multiple Enchondromata and Osteomata.—Bilateral Hemiplegia.—Congenital Dislocation of Hip.—Osteomalacia (?).—Alopecia Areata.—Radical Cure of Hernia.

THE ordinary meeting of this Society was held on Tuesday last, Dr. S. Wilks, F.R.S., in the chair. All the specimens shown were of considerable interest, and excited discussion.

Mr. HUTCHINSON described a case of Multiple Enchondromata of the Fingers, of very large size; the patient had been shown at the last meeting. The young woman's digits were all of them occupied, more or less, by enchondromatous tumours. The very unusual feature in the case was the coincidence of a number of exostoses near the epiphyses of the long bones, growing out into flat ridges, not at all in shape like the chondromata; these occurred on the bones of the forearm and leg, near the ankle, and near the right knee; there was also a peculiar deformity of the left lower extremity. She was said to have had hip-joint disease, the left lower limb being eleven inches shorter than the right, from arrest of its growth; the lower end of the femur was flattened, and the epiphysis was partially displaced; the trochanter projected comparatively very little, evidently from arrested growth. There was no history to account for these phenomena. She is now nineteen years of age, and under Dr. Elder's care (Nottingham). At five years of age she complained of pain in the hip, and attended at the hospital, and wore irons. There was no suspicion of rickets. Her parents are healthy, and there is no hereditary history of constitutional disease.—Mr. BUTLIN thought we should not be surprised at the coincidence of exostoses and multiple chondromata, as the cancellous exostoses are always covered with a layer of cartilage, and may probably be correctly spoken of as ossifying chondromata. In the digits chondromata very rarely ossify or calcify; in the large bones there is a great tendency for them to ossify. From the rapid growth of those in the hand he suspected they might be some form of chondrofying sarcomata, and liable to assume a malignant form.—Mr. HUTCHINSON said that seven years ago he had brought forward a case of rare nervous disease. At the last meeting the girl, now seven years old, was shown. She was an idiot, unable to stand or use her extremities to good purpose. She had lost one eye, which was excised when she was seven months old. There were deeply pigmented patches over the skin of the chest. Dr. Hughlings Jackson had diagnosed the case as one of symmetrical hemiplegia. Cerebral hemiplegia is not rare in children, but the affection in this case was remarkable as being exactly symmetrical. The muscles responded to galvanism; there was not the nutritive disturbance of infantile paralysis, and there was a tendency to contraction in the hands. She was born healthy, and is one of a family of quite healthy children, without any hereditary history of syphilis or general diathesis. When a few days old she was exposed to cold, and was for some time extremely cold. After that she was severely ill, with repeated convulsions. A few days later an eruption on the skin appeared; the skin was red all over, with little blebs. When seven years old Mr. Hutchinson first saw her; there were then scabs in various places—the remains of ulcerations—and the skin was marbled all over; now this has almost wholly disappeared, the few dark streaks which remain having become much darker. The eye was excised by Mr. Couper, and inflammatory effusion between retina and choroid was found. The other eye now oscillates very much, and sight is believed to be bad. Only a few misshapen teeth have as yet been "cut." There is some, but not great, arrest of growth. The case published by Dr. Haddon is closely allied to this, for one upper and two lower extremities were paralysed. Some years ago Mr. Hutchinson attended a child who was found icy cold, like the one first mentioned. In that case both the eyes were lost from effusion between choroid and retina. In a third case a young child had an anomalous illness, with extreme collapse, and subsequent symmetrical formation of cataract. Dr. H. Jackson conjectured that the occurrence of cerebral thrombosis caused these symptoms.—Dr. WILKS asked if sensation was perfect, and whether the lesion was thought to be located in any particular part of the brain.—Mr. HUTCHINSON said that sensation was perfect, the lesion was evidently in some part of the motor tract.—Dr. HADDON said that his case was that of

a boy, aged thirteen, who had been subject to fits from the age of one year. These fits were preceded by a distinct aura, which consisted in a disagreeable taste, then followed twitching of the right arm, and then general convulsions. There was great atrophy and arrest of development of the upper arm, with exaggerated reflexes. In the legs the adductors were spasmodically affected, the knees touched, the joints were rigid, reflexes increased, and double talipes equino-varus was present. As the fits began in the right hand, the lesion was supposed to be in the brain in the cortical part of the left motor tract, with extension of the sclerosis down to the opposite lateral tract. The fingers were hyper-extended and kept apart. Mr. Hutchinson's patient when supported had the same attitude as this boy.—Dr. WARNER thought cases of double hemiplegia in children not so uncommon, for he had seen two cases of symmetrical hemiplegia during the last year, each of them dating from birth. In one there was also athetosis. Another case recently under his care was that of a child that had never used its limbs. The hands were permanently fixed in the tetanic position. It was very small, at two and a half years of age, not being larger than a child of one year. It died of bronchitis and pneumonia. The skull was small, but otherwise normal. There was bilateral defect of development of the convolutions behind the fissure of Rolando. There was double hemiplegia from birth. In two of his cases there was evidence of syphilis in the parents.—Mr. HUTCHINSON asked Mr. Butlin if he had seen any cases of osteomata and chondromata together. He had never before seen the coincidence, nor had he seen the association of the peculiar deformity of the femur with these tumours. He believed that Dr. H. Jackson considered the lesion in the second case was a primary softening of the brain, now attended with the formation of cysts, along with atrophy of the cortex. Had Dr. Warner met with any concomitant affections of skin and eyes? In his case the lesion was not syphilitic or aggressive, which, he thought, marked it off from those related by Dr. Warner.—Mr. BUTLIN replied that he had not seen such coincidence, and he only knew of one such case recorded, and that was one mentioned by Wagner in Virchow's *Archiv*.

Mr. A. E. BARKER showed a specimen of Congenital Dislocation of the Hip-joint. The specimen was obtained from a child, aged one month, that was brought to the hospital with an acute abscess in the buttock, which Mr. Barker aspirated; the abscess refilled, and was then opened antiseptically. Another abscess at the ankle-joint was also opened. The child died the same night. The viscera were found healthy. Around the great trochanter of the femur there were found the remains of an abscess communicating with the joint. The capsule of the joint was three times the usual size, and quite loose; the acetabulum was shallow, misshapen, and lined with soft tissue, not articular cartilage; the head of the femur was represented by a small nodule covered with cartilage. At the root of the trochanter the bone was curved outwards. The interior of the capsule was congested; but there was no appearance of granulation or ulceration; there was failure of firm union of the three parts of hip bone in the acetabulum. He concluded that it was a case of congenital dislocation of the joint, with an accidental abscess outside the joint which afterwards opened into that cavity. The large capsule folded over into the acetabulum. The absence of signs of destructive inflammation of the synovial membrane all supported this view. He suggested that there had been want of development of the acetabulum first of all, then absence of ligamentum teres, and displacement of the head of the femur. This view he found to be corroborated by an examination of the collection of cases in the Musée Dupuytren, one of which is described as an example of arrest of development of acetabulum with congenital dislocation. Mr. Barker handed round two drawings of specimens in this museum.—Mr. H. MORRIS quite agreed that this was a case of congenital dislocation, if such be the right term to use for these cases, which are more properly to be regarded as cases of imperfect development of the acetabulum. The acetabulum, he noticed, had the triangular form commonly seen in these cases. In a good specimen of this deformity in the Middlesex Museum the head and neck of the femur are well developed, but there is no ligamentum teres. In some cases there is a ligamentum teres, although attenuated; so that he did not fully agree with Mr. Barker's theory of the order of events. One of the distinguishing features in most cases is elongation of the capsule and ligamentum teres. When double, dislocation is nearly invariably congenital. The Middlesex Hospital specimen is single.—Mr. BARKER had seen several cases of congenital dislocation, but in all the affection had been double.

Mr. DENT showed a patient suffering from great Deformity of the Bones. She was a female, aged eighteen, the eldest of five children, all of whom were free from rickets and syphilis. In 1873 she had measles, after which she was weakly, although previously strong. In a year later she had scarlet fever and convalesced slowly. There was then gradually increasing difficulty in walking, and genu valgum developed. In 1877 Professor Annandale treated her for excessive genu valgum; the internal condyle of the left femur was separated, and the deformity loosened. Soon after she became unable to walk without crutches, and this has continued. The mental condition fairly developed. Catamenia have not yet appeared. Her development has been entirely arrested since the onset of bone and joint trouble. The pelvis was that of a child, but otherwise normal. The wrists are much enlarged, and the whole upper limbs shortened; femora curved, with a marked curve backwards at the lower epiphysial line; both tibiæ markedly displaced back. He asked, Is this rickets or mollities ossium? Portal and many others have described mollities ossium as liable to follow eruptive fevers. He had been able to find several reported cases resembling this one more or less closely. Thus Billroth described a case of a boy, aged twelve, in whom bending of the bones began at three years of age, after scarlet fever; the bones were still soft. Humphry had seen a case of a girl, aged fifteen, with softening of one bone only. In his own case, the disease was chiefly situated at the epiphysial line. From these cases it seemed that, in the young, mollities is preceded by fever or some such disease; and the characteristic pains are less severe, and come on gradually. It may be local or general, and does not affect dentition. The condition of the viscera is not known; it is not shown to be connected with errors of diet.—Mr. PARKER had examined this patient, and thought it a case of late rickets, and suggested it be referred to a committee. This was assented to.—Dr. DREWITT thought it resembled the case he had shown last year. It had all the characteristics of rickets: great enlargement of the ends of all the long bones, and marked beading of the ends of the ribs.—Mr. EVE said that there is in St. Bartholomew's Hospital Museum a specimen of pelvis and femora, in which the femora are bent in closely, in the same manner as in this patient. It is described in the catalogue as rickets.—Dr. BARLOW agreed with Mr. Dent that it was allied rather with osteomalacia than with rickets; for the disease has spent itself entirely on the bones; dentition and the general nutrition had not been affected. As the epiphysial line is the most actively growing part of a child's bones, any disease affects that region chiefly.

Dr. ROBINSON showed a case of Alopecia Areata in a man aged twenty-six. His father had two bald patches. Five years ago a patch of baldness occurred over the occipital bone; nine months later other patches came on the head, cheeks, arms, legs, and pubes. He has not experienced any inconvenience from the disease; does not feel the cold more than formerly. In the face there is a symmetrical area of unpigmented skin; no eyelashes or eyebrows. Skin of scalp pale, with symmetrical patches devoid of hair, bounded by a slightly raised margin; the skin between has a few fine scattered hairs; axillæ are pale, and losing their hairs. Along the ulnar border of forearms is a long streak of normal hair and skin; and other similar patches are found over the back and lower limbs. The special points he wished to lay stress on were: (1) the absence of suffering, (2) the symmetry of the affection, (3) the absence of pigment in the skin, which (4) preceded the destruction of the hair, (5) the close resemblance of the affection to leucoderma.—Dr. THIN gave an account of four cases of alopecia areata in one family. The father, aged thirty-eight, remembers that as a boy his hair fell off and grew again repeatedly. From the age of fifteen to eighteen his hair was perfect. At the latter age patches of alopecia began in the usual way, and after six months, during which time they had increased in size, he had his head shaved all over and wore a wig. From that time the shaven hairs never grew, and the baldness became complete. The eyebrows and eyelashes were also then permanently lost. His daughter, now aged thirteen, became the subject of the disease eighteen months ago. After nearly the whole scalp had become nude, the hairs grew again, but were now white. Recently the white hairs began to fall out rapidly, and some other parts became

entirely bald. The disease was for the present again arrested, and downy white hairs were coming. A sister, aged eleven, has a small area near the nape, and a brother, aged seven, has two patches on the occiput; in both children the alopecia was observed early in January, 1882. The three children lived together and used the same towels, combs, and brushes.—Mr. HUTCHINSON thought these cases of great interest. He had seen a similar group of cases in a father and several of his children. He thought he found a minute fungus. He had since then seen many cases in which the fact of contagion was apparently present. In one case a gentleman was perfectly bald, and the wife's lady's-maid suffered from the same disease.—Mr. BALMANNO SQUIRE had noticed several cases of apparently contagious alopecia areata; one example was the occurrence of many cases in a school in which the boys often exchanged caps. Cases of complete alopecia are not so rare as is often supposed.—Dr. WILKS asked what English authors believed the disease to be parasitic.—Dr. THIN said none. Dr. Tilbury Fox had thought some cases parasitic.—Dr. CROCKER had met with cases apparently contagious, members of the same family or residents in the same house. Other cases have a distinctly neurotic origin; as, for example, in a boy who fell on his head, and soon became completely and permanently hairless. He had recently seen a boy who in a week became perfectly hairless and nailless, with no attempt at re-formation. He had never seen any fungus in such cases.—Dr. CROSBY had seen the disease affecting men of the same occupation; as, for example, two porters in one firm, but working in different places. He did not think it contagious.

Mr. DAVIES-COLLEY showed a specimen of a radically cured Hernia. The patient, eight years before death, was operated on by Prof. Wood for the radical cure of a rupture, which was successful for five years, then he had to wear a truss. One day it descended, became at once strangulated, and was operated on. Below the outer ring the fascia was very thick and strong. He carefully sewed up the sac. The man recovered rapidly and left, wearing a truss. Three years later he died from acute peritonitis from perforation of the duodenum. The hernial ring was found represented by a slight depression on the inner side. The processus vaginalis was obliterated, and the tunica vaginalis was nearly obliterated. This shows the very good results of sewing together the sac in operating for strangulated hernia. In some cases he excised the sac instead.—Prof. WOOD said that on looking up his notes he found that this case was congenital, of large size, with large rings. It was important, because it showed that a fibrous barrier may be made, which, in some cases permanently, in others temporarily, cures the hernia. He wished to know whether the hernia at Mr. Davies-Colley's operation was large and outside the external ring. He had seen cases of bulging in the groin from non-development of lower fibres of internal oblique, and transversalis. His 320 cases of operation for radical cure of hernia had shown him that congenital hernia was less amenable to operation for radical cure than others, and in such cases he now always removed the sac through a small opening, using antiseptic precautions. In many cases the cure is due to the union of the sides of the inguinal canal; failure arises from not getting hold of the proper parts—the conjoined tendon, &c. If only a small channel be left, it may enlarge. He found that if the cure lasts more than two years, it was in all probability permanent.

Dr. DUCKWORTH showed microscopical specimens of Alopecia Areata from a boy, who died from an accident. He had had attacks of baldness for about nine years. The line of demarcation of the diseased part was very distinct. The hair-follicles were atrophied, with considerable increase in their middle root-sheath; absence of sebaceous glands; sweat-glands not affected; hair-follicles beset with nuclei; the muscular fibres of follicles very plain; no parasites detected. There seemed to be a new, probably inflammatory, cell-growth, in the middle of corium, extending mainly along the follicles. The specimen had been examined by Dr. Vincent Harris, and Dr. Klein.

Mr. BARKER showed two card specimens:—1. Fracture of External Condyle of the Femur. 2. Early Caries of the Spine, commencing in the posterior aspect of the body of the vertebra.

The PRESIDENT announced that Dr. Donders, Dr. Panum, and Dr. Tarnier, had been nominated by the Council for election as honorary members of the Society.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Enchondroma of Humerus.—Pulmonary Thrombosis after Enteric Fever.—Germ Theory of Disease.—Bichromate Disease.

AT the meeting on Feb. 27th, Dr. Broadbent, President, in the chair,—

Mr. FRANCIS MASON exhibited a man who had been sent to him, at St. Thomas's Hospital, by Mr. George of Malvern. The patient was forty-five years of age, and had a large enchondromatous tumour, involving nearly the whole of the left humerus. The tumour measured, in its greatest circumference, twenty-four inches. It commenced nine years ago as a small lump on the outer side of the arm, about the situation of the insertion of the deltoid muscle, and had gradually increased in size without occasioning any pain. About a month ago Mr. Mason amputated the limb at the shoulder-joint, taking a skin flap on the outer, and a smaller skin flap on the inner, side of the growth, the joint being opened from behind, and the large vessels divided last. The antiseptic spray was not used during the operation, but was employed afterwards. The patient made an uninterrupted recovery, and showed no signs of having undergone so severe an ordeal. Photographs of the patient before the operation were exhibited, and also half the tumour in section. The whole tumour, together with the humerus entire, after all the soft structures had been removed, weighed nearly 11 lb.

Dr. CHARLES HOOD read notes of a case of Enteric Fever, followed by general phlebitis, with pulmonary thrombosis, death occurring on the seventy-seventh day of illness, in which the patient was seized during convalescence by phlebitis implicating the pulmonary artery. The patient was admitted into the West London Hospital, under Dr. Thorowgood, on October 29th, 1881. He was twenty-one years old, and had been ill before admission about three weeks. He presented the symptoms of enteric fever of mild type; and after admission began to improve, there being nothing in the nature of the case calling for special attention, except marked pain over the abdomen. Temperature was reported as being normal on the fifty-fifth day of illness, and remained so for the following eight or nine days, the patient being allowed to get up, his condition giving rise to no anxiety. Three or four days later, while up, the patient was suddenly seized with severe pain over the region of the spleen. There was a rise of temperature; and subsequently an attack of phlebitis presented itself. Eight days before death the pulmonary artery appeared implicated. The pulmonary trouble gained ground, as evidenced by the increasing dyspnœa, with a scanty hæmoptysis. It ultimately led to the death of the patient. The post-mortem examination showed pulmonary embolism; and in the ileum were found healed cicatrices. Dr. Hood wished to call the attention of the Society to the insidious nature of the onset of phlebitis in connexion with the pelvic and abdominal veins; and he urged the importance of taking special note of any symptom which might lead to an earlier diagnosis than that usually made. He mentioned the fact that cases of phlebitis were often preceded by pain over the hip; such pain often being in the first instance ascribed to rheumatism, but finally being evidently connected with phlebitic mischief. In support of this argument, he adduced two cases in which marked phlebitis had been ushered in by hip pain. He mentioned that the cause might be looked for in implication of the gluteal veins. Cases were also cited showing the insidious manner in which such attacks commenced: patients supposed to be convalescing favourably, until lesion of an important blood-channel directed attention to mischief which necessarily must have been present some days. He further wished to draw attention to gradual clotting, which may take place even in the pulmonary artery.—Dr. BROADBENT referred to the importance often to be attached to local pain in the early days of thrombus formation during recovery from enteric fever, and related a case in which a deep-seated and persistent pain in the calf of one leg was the first indication of a venous coagulation which eventually implicated the iliac trunks.—Dr. THOROWGOOD also referred to the symptom of acute pain, which in one case was referred to the neighbourhood of the hip, the real seat of the disease being in the uterine veins. The subject of Dr. Hood's paper had a particularly weak heart, the action of which improved under brandy.

Mr. MILLICAN then read a paper on the Germ Theory of

Disease, the full text of which will shortly be published in THE LANCET.—Dr. SANSOM thought the alkaloidal theory was held by but few observers of the present day. He considered the differences of soil even of more importance than those of organisms in determining the nature of the specific disease. The conception of a germ should embrace a protoplasmic basis and a soluble envelope of varying amount.—The PRESIDENT said that the germ theory threw light upon obscure points in the history of fevers. The paper was very valuable. It was to the country practitioner rather than to those of large cities that one must look for anomalous cases such as those on which Mr. Millican had based his remarks. The clinical account given of the case seemed like ulcerative endocarditis. The association of diphtheria and scarlet fever is not infrequent. He was convinced that the appearance of diphtheria might be absolutely independent of any pre-existing case.

Dr. B. W. RICHARDSON read a paper on Disease from Bichromate of Potassa (Bichromate Disease). He commenced by stating that the first description of the local diseases arising from the action of bichromate of potassa was given in this country by himself in a report on Forensic Medicine, in the October number of the *British and Foreign Medico-Chirurgical Review* for the year 1863. He was indebted for the facts to MM. Chevalier and Bécourt. In transforming the neutral chromate of potassa, by means of acid, into the bichromate, the vapour evolved carries with it an infinite number of pulverised particles of the bichromate, which particles diffuse through the workshop, and are easily visible in a ray of sunlight. The molecules, inspired in abundance, give to the palate a bitter and very disagreeable taste; but as profuse salivation is the result, the chromate is thrown off in the saliva, and has not time to inflict any permanent injury. If, however, the respiration be made by the nose, the molecules are dissolved in the layer of secretion which lies on the membrane of the septum of the nose, creating a violent pricking, suffusion of tears, and irresistible sneezing. In time the membrane begins to be thrown off, and portions of it are carried into the handkerchief used in blowing the nose; this process, when once started, goes on so rapidly that after a period of six or eight days the septum becomes thin, permeated with openings, and is ultimately detached altogether. At this point all the symptoms that have been described cease, and the workman scarcely notices the loss of the nasal partition. This process of ulceration of the septum of the nose occurs in every workman, except in those who take snuff. In these, owing to the layer of powdered tobacco which covers the membrane, and the frequent use of the handkerchief, the evil is often prevented. On the skin in its normal state, the epidermis being intact, the bichromate, according to the authors named, exerts no baneful influence; the hand may be plunged into a strong and hot solution of the salt without fear; the hand may also remain covered with the salt for an entire day, without any observed effect; but if the skin is torn or abraded, however triflingly, a sharp pain is felt on the exposure; and if the salt be left in contact with the wound the caustic character of the salt is brought out intensely, the cutaneous tissue is decomposed, and violent inflammation is established. These symptoms are accompanied with intense pain, especially in winter, when the cold is severe; the action of the salt does not cease until the cauterisation has penetrated to bone. When a workman is clean and careful he prevents these accidents, but if he is careless, and allows the bichromate, either in powder or solution, to touch abraded parts or sores, or wounded surfaces, he must immediately use remedial measures or suffer a severe penalty. In some cases, where the workmen are too lightly clad, they are attacked with violent itching, followed by suppuration and ulceration of the moist surface of the penis around the glans. This condition may progress until a disorder not unlike syphilitic ulceration may be presented. The effects of the bichromate are shown on inferior animals as well as man. Horses employed in the manufactory, and which walk over the salt, are attacked in the feet; the hoof falls off, the inflammation extends to the upper part of the leg, causing the hair to fall off, even to complete denudation. Some important particulars were supplied on this point by M. Clouet, a manufacturer at Havre. A horse employed in carrying the bichromate was attacked in one of his hind legs. The wound became so painful as to necessitate absolute rest; the suppuration went on extending through the limbs, and enormous suppurated surfaces invaded the almost entire half of the animal. Death occurred a month from the commencement of the malady. Some further facts were given from M. Clouet in reference to the nasal ulceration. It was shown that both sexes were equally influenced, and at all ages; that the affection usually made its appearance within a week after exposure, and that the disease was very easily brought about in workmen who, having stained their fingers with the bichromate, put them into the nostril. M. Clouet also made the remarkable observation that in all the workmen who had lost the septum, nasal catarrh was entirely unknown. Dr. Richardson observed that it was not reasonable to allow such an important piece of clinical observation as was conveyed in this report to pass without further inquiry. He began, therefore, soon after the appearance of the report to institute such an inquiry in this country. It was many years before he met with any evidence. At last, four years ago, a case not of nasal but of cutaneous disease came before him, in which the arms and hands of a worker in bichromate solution were severely attacked. The symptoms in this case presented the character of acute eczema of the arms, with a scaly eruption on the palm of one hand like psoriasis. Since then he had seen five cases of cutaneous affection from this cause, the details of which were given in full. In one of these cases the symptoms were like those of pityriasis rubra. The sufferers were workers in the autotype process of photography, in which a solution of bichromate of potassa is used to render the gelatine employed in the process insoluble, under the influence of light, in warm water. In regard to treatment it seemed clear that some local good was effected in certain stages by the use of subacetate of lead, but there was no rationale in other methods of treatment. In fact, the whole question of treatment resolved itself into one of prevention, and this was being carried out by the wearing of india-rubber gloves. Bichromate disease might therefore be looked upon as an affection of a transitory character, but at the same time as an affection of exceeding importance for study both etiologically and pathologically. It was an accidental synthesis of disease. Here was an inorganic substance which applied to the surface of the living body produced certain local diseases closely similar, if not identical, with other diseases, the causes of which are very obscure—viz., progressive cellular ulceration, assuming occasionally the rodent form; ulceration of cartilage and cutaneous affections which resemble the three allied diseases—psoriasis, eczema, and pityriasis. These symptoms progressed and passed through their stages towards recovery after being produced by an entirely local action. The facts opened up the novel question whether the same series of changes occurring from a less obvious cause in ordinary allied diseases might not be due to some local product which acted chemically upon the structures to produce the same effects. In conclusion, Dr. Richardson drew attention to the curious observation of M. Clouet—viz., that all his workmen who had lost the septum of the nose seemed to be protected from nasal catarrh. This observation, small as it might seem, had really important bearings both of a physiological and pathological order.

The Society then adjourned.

A fully attended general meeting took place at the rooms of the Society last Monday evening, the President, Dr. Broadbent, occupying the chair. The ballot was opened at eight o'clock and closed at nine o'clock, when the following result as regards the election of officers for the coming session was announced:—President: Mr. Francis Mason. Vice-Presidents: Dr. Richard Quain, F.R.S., Mr. Robert Brudenell Carter, Dr. J. Hughlings-Jackson, F.R.S., Mr. J. Cawood Wordsworth. Treasurer: Dr. Alfred Wiltshire. Librarian: Dr. William Henry Allchin. Honorary Secretaries: Mr. Edmund Owen, Dr. Isambard Owen. Secretary for Foreign Correspondence: Sir William Mac Cormac. Council: Mr. Henry Francis Baker, Dr. R. S. Fancourt Barnes, Mr. Samuel Benton, Dr. William Henry Broadbent, Dr. Sydney Coupland, Mr. John Hamilton Craigie, Dr. Henry Radcliffe Crocker, Dr. Thomas Stretch Dowse, Mr. John Henry Drew, Mr. Arthur Edward Durham, Mr. Frederick James Gant, Mr. Heneage Gibbes, Mr. David Henry Goodsall, Mr. Alfred Pearce Gould, Dr. F. De Havilland Hall, Dr. William Miller Ord, Mr. Walter Pye, Dr. Thomas Gilbart-Smith, Mr. William Frederick Teevan, Dr. C. Theodore Williams.

The usual votes of thanks to the retiring officers were formally passed; that to the President being proposed by Dr. Routh, an ex-president, and seconded by Dr. Crichton Browne; the latter gentleman remarking that whenever he

had been present at any meeting of the Society during the last year, he had been charmed with the admirable manner in which Dr. Broadbent had introduced the subjects for debate and directed the course of the discussion. The President, in returning thanks for the formal vote, and for the acclamation with which it had been carried, confessed that the Society was in a most flourishing condition, and that he had been fortunate in the surroundings of the Society during the year in which he had occupied the chair. He said that much of the success to which the Society had attained must be attributed by the Fellows to the never-failing zeal and energy of the retiring secretary, Dr. Gilbart-Smith.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on February 1st, Dr. Matthews Duncan, President, in the chair.

Doubtful Case of Double Vagina.—Dr. GALABIN showed a microscropical section of the septum dividing the vagina from a peculiar abnormal passage in a girl aged seventeen. She was admitted into a surgical ward in Guy's Hospital for what was thought to be a cystic dilatation of the base of the bladder or urethra protruding at the vulva. Dr. Galabin recommended it to be cut away and the edges brought together; but his surgical colleague declined to operate, fearing a permanent fistula. Dr. Galabin subsequently operated himself, but, on cutting across the swelling, found that he had not opened the bladder, but the lower extremity of a cylindrical passage, like a second vagina, lying in front of the left half of the main vagina, and ending just to the left of the os uteri in a small opening through which a probe could only be passed half an inch.—Dr. ROUTH asked if the narrow part of the canal had been explored, and what was the condition of the uterus. He thought a second vagina might lie in front of the main passage, instead of at the side. In cases of double uterus, one half was sometimes in front of the other.—Dr. CARTER had on several occasions met with cysts in the anterior vaginal wall, though none so extended as that described by Dr. Galabin. The cysts were opened, and found to contain a glairy mucoid fluid.—Dr. GALABIN said that the uterus could not be detected as abnormal on bimanual examination. He did not think the passage could have been a cyst, for it was cylindrical and not globular, and the contained fluid was not mucoid.

Retention of Menstrual Fluid in one half of a Double Uterus.—Dr. GALABIN also related the case of a patient, aged fifteen, who was brought by her mother for consultation for symptoms exactly resembling those of ordinary severe spasmodic dysmenorrhœa. No swelling or tumour had been noticed. Menstruation was fairly regular, and rather profuse. The pain was felt chiefly during the flow, was intermittent, agonising in severity, and led to retching and hysterical manifestations. On examination a firm globular swelling, without any fluctuation or elasticity, about as large as the uterus at three months and a half pregnancy, was felt through the anterior vaginal wall. The os was difficult to discover, and was displaced backwards and flattened antero-posteriorly. The patient was so hyperæsthetic that it was impossible to attempt to use the sound. The author rejected the hypothesis of fibroid tumour on account of the patient's youth, and the commencement of the symptoms with puberty, and felt sure that menstrual fluid would not accumulate to any amount in the uterus if there were any exit whatever through the cervix. He therefore diagnosed retention in one half of a double uterus. It was agreed with Dr. Stirling, of Grange-road, under whose care the patient had been, that an anæsthetic should be given, and the swelling evacuated if the diagnosis appeared to be confirmed on use of the sound. Under anæsthetics it was found that the sound passed easily to the normal length, going rather towards the right side, and the os appeared to be displaced a little to the right. The swelling was then punctured, and the usual treacly fluid, seen in cases of retained menses, began to escape. The opening was enlarged with scalpel and director, till it easily admitted the finger, and about ten ounces of fluid escaped. No injection was used on the spot, but it was intended to commence antiseptic injections, after allowing a few hours for complete escape of the fluid. The extreme hyperæsthesia and hysterical resistance of the patient, however, made it impossible to do more than syringe the vagina. Discharge of sanguineous fluid was free up to the third day, but it then almost stopped, and what there was became offensive. Next day febrile symptoms set in, the temperature rising to 104·6°, pulse to 140. The patient's friends refused to allow an anæsthetic to be given to wash out the uterus until the seventh day, when the author saw her again. There was then still high fever, but no sign of peritonitis. An anæsthetic having been given, the opening into the left half of the uterus was again enlarged, and the cavity washed out with solution of absolute phenol, 1 in 40. Considerable improvement followed up to the twelfth day, although it still proved to be impossible to do more than syringe the vagina, and little doubt was felt about the patient's recovery. On the twelfth day she was suddenly attacked with violent pain in the abdomen and collapse, and died in about twelve hours. The author thought that the symptoms pointed to rupture either of the Fallopian tube or of some abscess in the neighbourhood.—Dr. GRAILY HEWITT's experience had led him to the conclusion that it was safer, in performing the operation for retained menses, to make a small opening and allow gradual escape of fluid, and gradual contraction of the walls of the cavity, which were often weak and thin. If allowed to discharge itself too quickly a suction might afterwards be exercised, and septic material drawn in.—Dr. GERVIS thought that Dr. Galabin had himself pointed out what would have been the most useful addition to the conduct of the case, the washing out with antiseptic fluid the uterine cavity. He agreed with Dr. Hewitt as to the importance of moderately slow evacuation, but with antiseptic precautions, thinking that the danger was less through any uterine suction than through decomposition of unremoved fluid.—Dr. WYNN WILLIAMS differed from Dr. Graily Hewitt in that he made a very free opening, to get rid of all the menstrual fluid at once. He would have syringed out the uterus with a solution of iodine, which he believed the safest and best antiseptic. He would also have avoided making a second incision, any septic condition being present.—Dr. CHAMPNEYS had seen a case of retained menses in one half of a double uterus, under Dr. Winckel of Dresden. In this slow evacuation did not prevent a fatal result, which was caused by the retraction of the uterus from an adhesion, which tore a hole in the thin uterine wall. Death resulted from septic peritonitis.—Dr. CLEVELAND was surprised at the fear expressed as to the use of carbolic-acid injections. In chronic inflammation of the bladder he had used injections of absolute phenol, 1 in 50 or 60 of water, with excellent results.—Dr. CARTER agreed with what had been said as to the dangerous results which had at times followed the injection of a solution of carbolic acid into the uterus. He related the case of a patient who was for some time in a very critical state after washing out the uterus the third day after a miscarriage with a solution of the strength of 1 in 80.—Dr. MALINS thought there was some doubt about Dr. Galabin's diagnosis in the absence of an autopsy. The symptoms and physical state did not seem inconsistent either with an anterior hæmatocele or thrombus in the cellular tissue. He had met with similar cases in which the difficulty in ensuring drainage and disinfection had been overcome by using a winged catheter with the end cut off. He thought nothing better than tincture of iodine for disinfection.—Dr. ROUTH could not agree with Dr. Hewitt in his advice to make a small opening. Experience proved that it often closed, and occasionally was followed by fatal symptoms. His own plan was to draw off by a large aspirator, and to inject iodine solution, doing this morning and evening, and keeping in a drainage-tube.—The PRESIDENT would only remark that he, in cases of retained menses, made a free opening and allowed the fluid to drain away, using no injection of any kind. He had in a considerable experience had no fatal case or evil result, and he believed he had observed injurious consequences of the injection of plain warm water in cases which he had witnessed.—Dr. GALABIN thought that the plan of gradual evacuation was desirable when the quantity of retained fluid was large, but not when it was small or moderate. He did not think the fatal result in his case could be attributed to the injection of carbolic acid, or even to the second incision; for a marked improvement had followed that proceeding, and continued for at least four days. He did not believe the case could have been one of hæmatocele, for the swelling had been perfectly movable, and he did not think that the contents of a hæmatocele ever so perfectly resembled the uniform treacly fluid seen in cases of retained menses.

The President then delivered the annual address.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of this Society, held on Friday, Feb. 17th, 1882, J. W. Tripe, M.D., President, in the chair,—

Dr. ALFRED CARPENTER read a paper entitled "Some of the Causes which increase or modify the Infectivity of Scarlatina," of which the following is an abstract. He considered that a long period of quarantine, such as eight or ten weeks, and sometimes four months, was to be deprecated in the case of children recovering from scarlatina; he himself for many years had isolated cases for a fortnight, and in some instances for a week only, after the departure of the fever, and he had never heard of any evil result accruing from such a course. He next mentioned various cases in large schools which served to explain his views as to the cause of scarlatina. The first outbreak of which Dr. Carpenter made mention was, in his opinion, entirely caused by a cesspool, situated in the school-yard, which was the recipient of washings from a slaughter-house, and once a week, at least, the aerial contents of this cesspool were displaced into the closets of the boys, situated in close proximity to it. As soon as this cesspool was emptied and the drains properly directed into the sewer, scarlatina ceased to appear in the school. Want of proper ventilation in the soil-pipe and drains belonging to the building caused an outbreak of scarlatina in another school, the drains being in direct communication with the main sewer of the district, and scarlatina being also at that time very prevalent in the neighbourhood. Dr. Carpenter believed that the nature of the blood into which the poison was received aided more materially in increasing the mortality from scarlatina than the character of the poison itself, and, in support of this theory, he instanced two outbreaks of this disease, in one of which the mortality had been excessive, fourteen persons having died out of seventy-five who were attacked, while in the other outbreak only three deaths occurred, though the total number of cases was 108. Dr. Carpenter attributed this difference in the mortality to the surroundings of the children; in the one instance, the conditions were on the whole healthy, but in the other the children were exposed for a much longer period to an impure atmosphere, and were badly cared for at home. The cause of the two outbreaks was similar in character; the excreta of the first case of scarlatina in each school passed down unventilated drains, which communicated directly either with class-rooms inhabited by the children or with closets used by them. In conclusion, Dr. Carpenter said that he believed scarlatina more often arose from sewage emanations or sewage contaminated with scarlatina germs than from personal contact. He considered that in many cases where the cause of the disease had not been discovered, it might have been found, on careful investigation, to proceed from some accidental inhalation of sewer air, and that persons who were constantly exposed to such an atmosphere were liable to more severe attacks of scarlatina and diphtheria than those who inhaled the poison for a short period. Dr. Carpenter also suggested that the discharge of hot water and waste from steam-engines into the sewers was a source of danger in producing scarlatina and diphtheria.—In the discussion which followed, the President, Dr. Churchill, Dr. Child, Mr. Jacob, Dr. Kelly, and Mr. Shirley Murphy took part.

Reviews and Notices of Books.

The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery by Authors of various Nations. Edited by JOHN ASHHURST, jun., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-lithographs and Woodcuts. In Six Volumes. Vol. I. pp. 717. London: Macmillan and Co.

[FIRST NOTICE.]

IN one of his Essays Macaulay observes that the book he was reviewing might, before the Deluge, have been considered light reading by Hilpa and Shallum, but that it was hardly fair to expect mortals of the present day to find the time that was necessary for its perusal. Nearly the same might be said of the work before us. This, the first instalment of six corresponding volumes, is of prodigious size, and will remind the ingenious reader of the mighty tomes which used to be chained to their places in the few libraries that existed in mediæval times; and we are almost tempted to doubt whether anyone, however industrious, will ever read it from beginning to end. We can only hope, for the sake of the younger generation, that no examiner will possess the requisite leisure, and that it will not therefore constitute a part of the literary equipment of the juvenile student. The term "Encyclopædia" applied to the work is indeed thoroughly justified by the large scale on which it is projected; whether it can be correctly designated "International" remains to be seen. At present, of the seventeen articles contained in the first volume, four only are written by foreigners—one being by an Austrian, one by a Frenchman, and two by Englishmen; the remaining twelve are by Americans, and it is therefore essentially a reflex of American surgery. Nor do we at all mean to disparage it on this account. On the contrary, it is a matter of great importance that we should possess an authoritative exposition of the science and art of surgery as understood, taught, and practised in America. The American surgeons are second to none in the world for their sound practical knowledge, and whilst in some departments they are unrivalled, in almost all they have brought their singularly inventive genius to effect mechanical improvements which have come into general use and have proved of the greatest value.

The contents of the volume are thus arranged:—Disturbances of Nutrition; the Pathology of Inflammation, by S. Stricker; Inflammation, by W. H. van Buren; Erysipelas, by Alfred Stillé; Pyæmia and Allied Conditions, by Francis Delafield; Hydrophobia and Rabies; Glanders; Malignant Pustule, by William S. Forbes; Scrofula and Tubercle, by Henry Trentham Butlin; Rachitis, by J. Lewis Smith; Scurvy, by Philip S. Wales; the Reciprocal Effects of Constitutional Conditions and Injuries, by A. Verneuil; General Principles of Surgical Diagnosis, by D. Hayes Agnew; Shock, by C. W. Mansell-Moullin; Traumatic Delirium and Delirium Tremens, by William Hunt; Anæsthetics and Anæsthesia, by Henry M. Lyman; Operative Surgery in General, by John H. Brinton; Minor Surgery, by Charles T. Hunter; Plastic Surgery, by Christopher Johnston; and Amputations, by John Ashhurst. There are 199 woodcuts and 3 chromo-lithographs.

Professor Stricker leads off with an article on the Pathology of Inflammation which has been well translated by Dr. Alfred Meyer, and which is interesting as representing a new and perhaps again only a transitory phase of the cell theory in relation to inflammation. What changes, indeed, have not this generation witnessed in the opinions of pathologists in regard to the origin of pus cells, and how much has been learnt only to again be unlearnt, how much advanced only to be denounced as entirely incorrect! Who amongst the older members of the profession does not recall the account of the process of suppuration as described by Virchow, with its division and separation of the nucleus, the hour-glass constriction of the cell, and the division of the cell body, with the production of two new cells, an account which was, at one time, fondly supposed to complete our knowledge of this part of pathology, and to render further inquiry in that direction a work of supererogation? Who does not recollect the sudden change of opinion and the flood of light that were supposed to be thrown on the subject of inflammation by the statements of Cohnheim on diapedesis, and by his observations on the inflammation of the cornea, showing, as they were believed to do, the presence of two kinds of cells in that membrane: one fixed and proper to the tissue; the other migratory, wandering, and consisting of escaped white corpuscles, to which the cloudiness of the cornea in keratitis was

due? Indeed, if there were one fact which we should have considered to be firmly established in histology it is that the cornea presents cells as one of the constituents of its structure. Have we not all seen the flat-branched cells stained with silver and with gold and other reagents? Are not the pictures of these familiar to us? Yet, alas for the stability of microscopical observations, we find Professor Stricker making the startling statement that the migration of cells into the cornea is an illusion, and that since in the fresh cornea he is unable to see any corpuscles, therefore it is undetermined whether they exist there at all. He even maintains that they are *formed* under the influence of inflammation or of reagents, and thinks he has proved by direct observation that under the influence of the process of inflammation basis substance is transformed into branched cells, and conversely that branched cells are converted into basis substance. Throughout the whole article, indeed, Professor Stricker labours to show that inflammation is associated with metamorphosis of tissue, the elements of each tissue returning to their embryonic condition—that is to say, the cells of which the tissues are composed become again susceptible of motion which leads to their disintegration and to the production of pus cells. The article contains some other remarkable statements. Thus, in speaking of the contractile elements of bloodvessels, after noticing the superior contractility of the small, as compared with the large arteries, he observes: "It is indeed true that the arterial wall is distended in consequence of every systole, but it is not proved that the so-called elastic substances of the arterial wall are involved in this distension. In general we do not know whether the elastic substances of the organism possess any elasticity worth mentioning. We must not be deceived by the name 'elastic.' The fibres have been called elastic because the filaments of a lower end curve inward like elastic springs, but we do not know if these fibres are distensible like caoutchouc. I do not even consider it at all likely." We should join issue with Professor Stricker in regard to the reason of the term "elastic" being applied to the fibres under consideration, and we should consider that no question could be raised as to the possession of elasticity by such tissues as the vocal cords, and the elastic ligaments of the spine, the histological characters of the fibres of which so closely resemble those of the so-called "elastic" fibres of connective tissue, and of the arterial walls, as to render it probable on histological grounds alone that these properties are similar. He gives the following curious picture of striated muscle (p. 44): "In transversely striated muscle, the appearance of things is at times somewhat the same as in a dance. The couple change, and the grouping varies; whoever does not observe the changes will it is true always see dancing couples. Nevertheless, they are not always the same couples, and it may happen that at one time only single pairs are dancing, at another time two pairs are grouped together, then again several pairs. The dancers may resolve themselves into rows walking in single file (fibrillæ), or may form a broad front, and march in columns. Finally, they may break up the dance, and move about without regular order, or may remain quiet after breaking up." A point that will, we think, be new to most of our readers, is Professor Stricker's account of the mode in which the contraction of the lumen of a capillary is effected. He remarks, "When a muscle contracts it becomes shorter and thicker, but a capillary cannot diminish in length. How, then, is the narrowing of the tube brought about?" Golubew several years ago observed that protuberances are formed on the inner wall of capillaries when contracting, and the lumen of the tube is diminished by the formation of these protuberances. Stricker supports this statement, and agrees with Golubew in believing that such swellings only occur at certain points, and that they are usually not situated exactly opposite to each other. The capillaries therefore resemble in some respects a distended elastic tube, the walls of which become thicker as it contracts, though they differ, as he points out, from such tubes in various particulars. Professor Stricker admits the occurrence of "active dilatation" in the vessels.

The article on Inflammation by Mr. H. van Buren is in every way a valuable contribution to the literature of the subject, and is dealt with in a practical manner. The key-note is found in his division of the phenomena observed in inflammation into two groups—one, which he terms "constructive," and which includes afflux of blood, exudation, cell germination, the formation of new capillary vessels, and the development of cicatricial tissue; the other, to which he has applied the term "destructive," including suppuration, ulceration, and gangrene, with all other harmful complications of the process. It is, of course, impossible to follow Dr. van Buren through all the details of his essay, but we may remark that his account of the causes of inflammation is unusually complete, and is accentuated by brief details of cases supporting the statements made in the text. The views of Pasteur, Billroth, Lister, Klebs, Koch, and Sanderson are all referred to, and their results are given in a well digested and clearly written section. It will be satisfactory to Mr. Lister to find that, notwithstanding the reluctance to innovation that is a characteristic of the members of every profession, his views, after much criticism and some ridicule have been bestowed upon them, are becoming more and more widely accepted, and that they are adopted by American surgeons.

Syphilis and Local Contagious Disorders. By BERKELEY HILL, M.B. Lond., F.R.C.S., Professor of Clinical Surgery in University College, Surgeon to University College Hospital and to the Lock Hospital. Second Edition, entirely rewritten, by BERKELEY HILL, and ARTHUR COOPER, late House-Surgeon to the Lock Hospital. London: Smith, Elder, and Co. 1881.

NOT only has this edition been entirely rewritten and Mr. Berkeley Hill helped in his labours by Mr. Cooper, but two important chapters have been assigned to others. Dr. Gowers is the author of that on Syphilitic Affections of the Nervous System, and Mr. Nettleship of that on Syphilitic Diseases of the Eye. As these are affections which do not in ordinary practice come under the notice of general surgeons, it is a distinct gain to this book to have them described by those who are somewhat specially interested in and familiar with them. The general character of the first edition is maintained in this, but every part shows signs not only of alteration but of great improvement, and we have no hesitation in pronouncing it to be decidedly the best work on the subject in the English language. Every detail is dealt with fully and practically, and the greatest care has been taken to make the references to other authors and sources of information as complete as possible. The chapter on the Contagion of Syphilis evinces great critical ability, the views of other writers, which have in some cases been advanced on insufficient grounds, being each in turn ably discussed. Mr. Berkeley Hill adheres to his previously expressed opinion that the local infective sore or soft chancre is quite distinct from syphilis, and those who give heed to his reasonings will discover that he has much to urge in support of his position. The results of the labours of Dr. Barlow and others in the field of visceral and vascular syphilis are of course incorporated in this edition, which is a thoroughly good book.

AT the annual meeting of the governors of the Hastings Infirmary it was resolved to take means to ascertain the opinion of the governors as to the desirability of purchasing St. John's Villa, at a cost of £12,000, as a site for a new infirmary.

THE LANCET.

LONDON: SATURDAY, MARCH 11, 1882

THE universal feeling of mingled indignation and thankfulness which was awakened by the attempt made on the life of Her Majesty the QUEEN on Thursday week—indignation at the attempt and thankfulness for its failure—had been superseded by anxiety as to the nature and cause of the outrage, when, to the great relief of the loyal mind of England, it was announced that the would-be assassin was a lunatic. Assuming this to be the fact—and the question of fact is now reduced to one of legal identification,—it is impossible not to recognise, and it would be affectation to ignore, the very grave issues which have been raised. One of the most obvious is already on the lips of every commonplace conversationalist. Indeed, it seems the proper thing to say on this occasion, "What a shame to allow a madman like that to leave his asylum and go at large!" The obvious reflection would appear to be that either some mistake has been made or a certain amount of carelessness must have occurred to allow so dangerous a person as MACLEAN has proved himself to be to be set at liberty. If any lunatic ought to be kept under lock-and-key, this man should have been.

The truth is, there are three broad classes of the insane with which society has to deal. First, that composed of the subjects of incipient mental disease or of some recognisable neurosis which renders the organism in which it occurs *likely* to develop overt "insanity." It is in regard to persons of this class that most of the difficulties in practice and differences of opinion arise. Probably, except in the rarest of instances, if ever, no *perfectly* sane and sound person has been suspected of being insane, or by an error of judgment or malfeasance been placed in confinement. It is in doubtful cases that mistakes occasionally, perhaps, occur, and it is in cases of this class the blunder of treating a man as a lunatic when he is not one is likely to produce disastrous results. The sort of error sometimes made in such instances is grotesquely absurd from a scientific point of view, because the patient's physical peculiarities and his habitual eccentricities,—all which have, of course, existed before, and if they were indications of anything, indicated a neurosis, and not insanity,—are now plausibly but audaciously claimed as proofs of lunacy, and will generally be found paraded in the "certificates." A better acquaintance with the principles of applied logic than the majority of examiners would appear to possess would prevent this specious but mischievous blunder. It is, however, as we have remarked, with this class of persons, comprising those who are on the borderlands of insanity, that the greatest practical difficulty occurs. Clearly no man ought to be placed in confinement simply because his gaze is shifty, his temper irritable, his mind plagued with doubts and suspicions, or because he scratches the parietal region of his head in a fashion which experts are pleased to regard as significant. On the other hand, it cannot be questioned that a very considerable proportion of the total number of persons exhibiting recognised peculiarities of physical development and manner are in actual jeopardy, and *will* go mad if the circumstances in which they happen to be placed should chance to prove favourable to the development of certain "germs of disease," if we may use that metaphor.

A second class of cases consists of the actually insane. Even in regard to individuals falling under this general description it is often difficult to determine the proper course to pursue. Are persons who have once suffered from mental disease, and who, in the nature of things, are likely to suffer in the same way again, to be kept in confinement during the intervals in which they exhibit no discoverable symptoms of mental derangement, although perhaps the underlying disease is only in a stage of quiescence? It would be a monstrous maxim to formulate as the basis of a rule of practice—once lunatic always lunatic! The asylum accommodation provided must at once be quadrupled, and society and the busy world would be deprived of some of their most admired and useful members, if the principle embodied in this aphorism were to be adopted. Nevertheless, if this utterly impracticable rule-of-thumb be not adopted, there must every now and again occur cases in which the community is scared by some outrage committed by a relapsed lunatic. It may be doubted whether discharged lunatics should not be required to report themselves, at intervals, to the superintendent of a public asylum, for some years after their dismissal from the institution in which they have been confined. We think they should, and we fail to see that this requirement would entail any great inconvenience; but it cannot for a single moment be seriously supposed that mental disease is to be treated as a life-long infliction in all cases. In truth, the interests of cure at this moment suffer grievously from the prejudice which a too common belief in the final incurability of disease affecting the mind entails.

There is a third class of cases, including the so-called "cured," as to whose recovery there does not seem to be a doubt. Are the persons in this class to be detained, or—as the agitators would say, *pace* Dr. WOOD—"to be kept in prison" after their convalescence is fairly completed? The answer of science and common-sense cannot fail to be a negative. Yet it is probably to this class the man MACLEAN belongs. It will be shown that he had "recovered," and that he was discharged "cured." At least one-third of the total of such cases fall back into the ranks of the insane population; and the proportion of readmissions would be greatly larger than this but that only those cases which go back to the asylum where they were previously placed are counted in the ill-digested statistical returns supplied by the Commissioners in Lunacy. Taking the lowest computation, there is a formidable class of possible and *irresponsible* wrongdoers with which society has to deal. As Dr. EDGAR SHEPPARD has pointed out in regard to "criminal" lunatics, there is often a minimum of insanity with a maximum of vice or tendency to crime in these cases. It is, we think, a serious question whether the limits of the hypothesis of irresponsibility ought not to be narrowed instead of being extended so widely as to include the great majority of evil-doers, as materialistic psychologists seem to desire. This question cannot obviously be discussed at the present con-

juncture. Our immediate purpose is to show that it must not be hastily assumed, because a "discharged" lunatic has perpetrated this gross outrage, that the asylum medical officers have been to blame.

It is a cause for sincere satisfaction that this hideous crime does not stain our honour as a nation of loyal and law-abiding people. The QUEEN is revered among us by the whole population; and notwithstanding all the turbulent talking in our slums — and among those classes which are discontented under every part of the face of heaven because they have no stability in themselves,—we may still hope and believe that no man among us would seek the life of our gracious Sovereign unless he were insane.

IT is altogether premature to speculate on the nature and drift of the forthcoming Report of the Medical Acts Commission. It is true that the evidence for the Blue Book is probably closed, and that in the recent meetings there have been discussions as to the main features of the Report; but the Report itself is not yet agreed to, and there will be no further meeting till April 1st, rather an ominous day, by the way. The chief reason for this delay is said to be that Professor TURNER cannot attend sooner. It is to be regretted that such delay should be unavoidable. There is undoubtedly much suspense and tension among the medical examining bodies, and almost an arrest of all progress, in consequence of the feeling that the Report of the Commission is the only basis on which a permanent and solid arrangement for State examinations must stand. For the sake of the examining bodies, and for the sake of medical students, it is most desirable that the Report should soon be produced, and that it should prove equal to the case which it is to elucidate, and the difficulties which it has to solve. But the reason for so long an interval before the next meeting is a good one. It is very important that the Report should be unanimous, or, at any rate, that it should not be discussed or adopted in the absence of a member of the Commission so prominent as Professor TURNER. Professor TURNER represents the interests, primarily, perhaps, of the Scotch Universities, but also of the Scotch corporations. Some persons seem to think that the Scotch bodies will continue their opposition to medical reform, even in a minority of the Commission. We will not believe this till we see it realised in a report. Of all bodies interested in medical reform none are more so than the Scotch bodies, universities and corporations alike. It will be a matter of deep regret if they should put themselves into antagonism to schemes for securing a fair approach to uniformity in the minimum conditions of medical licence in each division of the kingdom, and for reducing the number of rival and superfluous corporations. It would be unreasonable in a high degree to think that we could diminish the number of medical corporations in England and Ireland, and leave them undiminished in Scotland. The very fact that there are as many medical corporations in Scotland as in England, with a population not more than that of London, and that they have not enjoyed the privilege of licensing for more than a limited territorial area for a longer period than twenty-two years, is ample justification for applying reform measures freely to them as to the corporations of the other divisions of the kingdom. The very fact that Scotland educates and examines a large proportion of English students, or of students who ultimately become English practitioners, is a reason why she should be foremost in promoting reasonable changes, and why she should court the creation of securities of equality in the work of bodies that are either doing equal work in their respective divisions or are underselling and competing with each other. It is due to Scotch licentiates, to say nothing of Scotch graduates, that there should be no reluctance on the part of Scotland in this matter; and, indeed, it is the duty of all the medical authorities of the kingdom to show some public spirit and agree to changes which shall put an end to the mutual disparagement which is so often expressed outside of the Medical Council, and even by such distinguished authorities as Mr. SIMON. Rightly or wrongly, Scotch corporations, and even the great universities of Scotland, not excluding that ancient and grand university represented so ably by Professor TURNER, have had their full share of this disparagement; and that gentleman will confer a favour on Scotch licentiates and graduates alike by taking a bold course and accepting any reasonable reforms which shall supply public tests of the work done in Scotch examinations.

We cannot regret, therefore, the delay in the work of the Commission. We can only express our hope that it will abolish competition in low examinations, that it will reduce the number of medical corporations, and that it will introduce into the Medical Council members representing general practice and the practical side of medical education.

A CAREFUL and detailed investigation into the minute changes in the salivary glands in rabies, by Dr. ELSENBERG of Warsaw, the results of which have been published in VIRCHOW'S *Archiv*, constitutes an important contribution to the pathological anatomy of the disease. The alterations in these glands have been but little studied by those who have especially investigated the subject. In the submaxillary glands the interstitial tissue was found to present conspicuous alterations. It contained numerous cells, some apparently those of connective tissue, but most of lymphoid nature. These infiltrated the whole interstitial tissue of the gland, but in various degrees in different parts. They were more numerous in the neighbourhood of the small and middle-sized ducts than in the vicinity of the capillaries and small veins. In some places the accumulations of lymphoid cells were one or two millimetres in diameter, and resembled foci of suppuration. Towards the periphery of the lobules the infiltration became slighter. Small cells, sometimes in several rows, were accumulated between the lobules. In the dense connective tissue, about the larger ducts and vessels, the cells were comparatively scanty. A moderate infiltration was also found about and within the intra-glandular nervous ganglia. The vessels were distended with blood, containing many leucocytes, which were aggregated against the wall, and all the appearances were in harmony with the view that the infiltrating lymphoid cells were escaped leucocytes. The alveoli of the gland were narrowed by the infiltration, and their epithelial cells presented conspicuous alterations, being shrunken even to a third of their normal size, and their nuclei enlarged, while lymphoid elements were infiltrated among them. In some places the

glandular cells contained large granules, and some alveoli were crammed with granular material. Other cells no longer gave the usual colouring reaction of mucoid cells, but those of ordinary protoplasm. Similar changes were seen in the peculiar crescentic cells which are found in the gland, and in some of these the nuclei had undergone multiplication. In the sublingual gland very similar alterations were found, but the changes in the glandular cells were less extensive. Only slight alterations were met with in the orbital glands, and these consisted chiefly in an infiltration of the interstitial tissue. These morbid appearances were found in each of twelve rabid dogs examined, and they may thus be regarded as constant. On the other hand, the parotid gland was perfectly normal in eight, presenting in only one-third of the cases slight changes. These were similar to those met with in the other glands, but the interstitial infiltration of lymphoid cells was much more marked than the intra-acinal changes. The investigation included only one case of unquestionable rabies in the human subject. In this the sublingual gland presented changes similar to those above described—leucocytal infiltration, and, in places, changes in the proper gland cells, protoplasmic transformation of the mucoid cells, &c. In the submaxillary gland they were much slighter, while the parotid presented no abnormal appearance, an interesting fact in connexion with the less constant affection of this gland in the dog. These changes, ELSENBERG believes, must be regarded as those of inflammation. His observations lead him to regard the alteration in the epithelial cells as the primary change, and the interstitial infiltration as secondary. WEBER has asserted that the increased secretion of saliva, which can be produced by irritation of a sensory nerve, may lead to secondary inflammatory change. But in rabid dogs there is no increased secretion of saliva; on the contrary, according to ELSENBERG'S observations, it is actually diminished, and only escapes from the mouth when pharyngeal disturbance renders swallowing impossible. The changes, therefore, cannot be referred to this cause. Nor is there any buccal inflammation to justify the assumption of an ascending catarrh. The transient fever which exists in dogs is also altogether insufficient to explain the glandular change. Hence ELSENBERG concludes that it must be referred to the direct action of the poison of rabies on the glands similar to that of the typhus poison on the parotid gland. The virus is excreted by the saliva, and irritates the glandular parenchyma. The distribution of the alterations makes it also probable that the poison is excreted chiefly by the submaxillary and sublingual glands, and not by the parotid. The constancy with which the changes are met with in the dog in two glands confers on them considerable diagnostic importance when there is doubt as to the real cause of an animal's death. In other diseases inflammatory changes in these organs are extremely rare, being scarcely ever met with except from injury or direct extension. Few poisons, moreover, are capable of inducing changes in them. ELSENBERG has investigated their state after death by injection beneath the skin of nicotin, pilocarpin, muscarin, and cantharidin; but only trivial alterations were found to be produced by the first three, and none by the last. In man, however, the changes in these glands are of little diagnostic value on account of their slight degree, and because similar alterations attend certain other infectious diseases and may be even produced by therapeutic agents.

THE two Compulsory Infectious Disease Notification Bills now before Parliament differ materially in their mode of drafting, and, if we may express an opinion, in the indication of statesmanship they furnish. The English Bill, proposed and brought in by Mr. HASTINGS, Sir TREVOR LAWRENCE, Dr. FARQUHARSON, and Mr. BRINTON, considers the subject-matter so matured that from the passing of the Bill it would apply the law forthwith within the boundaries of England and Wales, excepting where experience has recently shown it to be most needed (assuming it to be needed anywhere)—the metropolis. The Irish Bill prepared and brought in by Mr. GRAY, Mr. DAWSON, and Mr. O'SHAUGHNESSY, would subordinate the application of their Bill to the request of particular sanitary districts and the approval of the Local Government Board (Ireland). The latter system seems more consistent with the state of trial the compulsory method is now undergoing in the various localities where it has been permitted by various local Acts of Parliament. But both Bills are at one in riding roughshod over the time-honoured traditions of the medical profession, and resting the essence of this legislation on the compulsion of a medical man, under penalty, to give information to the Sanitary Authority of practically all serious infectious diseases whenever or wherever he comes professionally across them. Nay, with a delicious refinement, the English Bill provides that not only "any medical practitioner attending shall do this," but that any medical practitioner "requested to visit and attend any inmate of any building in the district of any sanitary authority" shall be called upon to do the same. This implies clairvoyance on the part of all medical practitioners, but how this form of clairvoyance is to be reconciled with the "notice" appended in the Schedule to the Bill is not explained. The backbone of both the English and the Irish Bills rests in the medical notification, for the alternative proposition in the English Bill, that where a medical attendant is not called in, notice of the sickness shall be given by the occupier of the house or the person who is in charge of the sick person, suggests a vision of laxity and eccentricity of notification which may well alarm the least sensitive sanitary officials who would be engaged in administering the law. The Irish Bill more sensibly provides that "so soon as the occupier or person in charge shall become aware of the existence in any such inmate of any such disease, he shall forthwith cause notice thereof to be given to the Sanitary Authority at their office."

At the first aspect there is perhaps much to be said in favour of this compulsory disclosure of serious infectious diseases to sanitary authorities. But has experience thus far justified this aspect? Has it not rather given an exaggerated importance to the consideration of infectious diseases in general sanitary work of a district, to the detriment of the latter? Judging from the annual reports of medical officers of health now appearing in our columns this is the obvious conclusion. To say of these reports that they consist for the most part of a history of the progress of infectious diseases in their several districts during the year is

to state the actual fact. Few things are more remarkable than the mode in which the majority contrive to pass over the general sanitary condition and requirements of their districts, as if indeed their instructions ignored these altogether. Indeed, so much prominence is given to infectious diseases in these reports that we have already had occasion to observe that there was danger of cultivating a general dread of infection among the public which would reproduce the exaggerated notions of the quarantine epoch, and render the people wholly uncontrollable in face of a grave epidemic.

And then who will estimate the damage done by the destruction these Bills would cause of the confidence which has at all times existed between the medical man, his patient, and their families? The gain to be obtained from the Bills would certainly fall far short of what their promoters hope from them, and afford a poor compensation for the unhinging of that sacred bond which has united the medical practitioner with his patients for ages.

That the English Bill will pass in its present form, considering its huge omission and its careless drafting, we think is out of the question. The Irish Bill, having regard to the state of development of public health administration in that island, appears to be altogether too premature. Meanwhile let the members of the profession look to these Bills, lest they find themselves pushed too close to the wall.

Annotations.

"Ne quid nimis."

SIR WILLIAM JENNER AND THE QUEEN.

A STATEMENT has got abroad to the effect that Sir William Jenner is to accompany Her Majesty the Queen to Mentone. This is a mistake, and one which calls for correction. Neither the profession nor the public would grudge the Sovereign the exclusive attendance of the leading physician of the day if there were any real need for his services; but it is not customary to call the principal medical attendant of the Queen to his post except in case of necessity. Dr. Reid, the resident physician, will attend Her Majesty on her Continental trip this year, as Dr. Marshall attended the Queen when she went to Italy. It is desirable that this should be understood, otherwise an impression may prevail that the aid of Sir William Jenner will not be available for consulting purposes, which at this season would be especially regrettable.

VIVISECTION AND DISEASES OF ANIMALS.

THE excellent article on "Vivisection and Diseases of Animals," by Mr. George Fleming, in the current number of the *Nineteenth Century*, is a convincing defence of the practice of experimentation on animals. The illustrations are for the most part taken from the domain of veterinary medicine and surgery, and refer chiefly to contagious and infectious diseases. The results are striking, whether they be regarded from an economical, a scientific, or a humanitarian point of view. After describing the nature of the infective materials of communicable diseases and the extraordinary results obtained by artificial communication, Mr. Fleming shows the enormous saving of life and money that has been effected by preventing such diseases as anthrax or splenic fever, and chicken-cholera, through inoculations. The losses inflicted by anthrax are, Mr. Fleming observes, appalling. In one district of France alone—Beauce—it kills about 178,000 sheep, which, at only thirty francs a head, are worth 5,340,000 francs, or £213,600. In 1857, from the Russian Empire, it was reported that 100,000 horses had perished from anthrax. From every country and from every quarter of the habitable globe similar statistics are obtainable. The experiments of Delafond, Davaine, Chauveau, Toussaint, and others, but above all Pasteur, have led to the remarkable discovery that, as with variola, the energy of the poison "may be so modified that, when inoculated into healthy animals, instead of destroying them, it only gives rise to, at most, a slight ephemeral disturbance, and confers immunity." At Melun, of fifty head of sheep and twelve head of cattle, one-half was inoculated with the cultivated virus of anthrax, and fifteen days subsequently the entire number was inoculated with the uncultivated or natural virus. Forty-eight hours later, those that had not been inoculated with the cultivated virus were all lying dead, while those that had been protected by previous inoculation with the cultivated virus were grazing in perfect health among them. The method of cultivation and inoculation so successful in anthrax had already been adopted in the fatal pestilence of poultry known as "fowl cholera"; and Mr. Fleming anticipates that sooner or later a similar success will be attained in rabies, glanders, contagious pleuro-pneumonia, swine plague, "distemper" in dogs, and even in tuberculosis of cattle, and other infectious and contagious diseases. As regards glanders, he mentions the fact that in cases of doubt, or where facilities for isolation are absent, test-inoculations into other horses or into asses are resorted to, in order to clear up the diagnosis. "By this precautionary procedure," Mr. Fleming asserts, "many horses, possibly those of an entire regiment or army corps, may be saved from peril, and human lives preserved from a loathsome and fatal disease." Mr. Fleming concludes his interesting paper thus:—

"In elucidating the processes of disease, in framing preventive measures, in investigating the spread of contagious disorders, as well as in perfecting modes of cure, and the most humane methods of surgical operation, experiments on living creatures are *absolutely necessary*, for their own interests no less than for those of mankind. Veterinary medicine and surgery are based on humanity no less than on utility, and their aim is to remove or alleviate pain among the animals placed under the dominion of man. By experiments in pathology, disease and mortality have been vastly diminished, and continued experiments in the same direction will cause further diminution. If mankind benefits, so do animals. A discovery which will avert disease in one will probably do so in the others: every advance of knowledge is a boon to all. To prohibit resort to experimental pathology would be at once to doom creatures which we are bound to protect, to the endurance through all time of terrible suffering from diseases that might otherwise be vanquished. Abhorring cruelty in every shape, and desirous of abolishing it by every possible means, I must nevertheless deprecate the attempt to place a barrier across the path pursued in pathological investigations on animals."

"WORKMEN AND WINTERING ABROAD."

THE accredited organ of the English trades unions, the *Labour Standard*, raises the question of sending some of the sick poor to winter on the Riviera. The organ of the organised working classes of England does not plead for increased generosity on the part of our philanthropists and charities; it suggests that the enormous sums spent over the building of palatial hospitals, such as St. Thomas's, would have been employed more "in harmony with the latest teachings of the medical art" if a few of our ordinary hospital patients had been sent down to the Riviera for the winter.

Financially the scheme is quite feasible. Even as matters now stand, the journey to Hyères, which is the nearest of the winter resorts, is only £4 14s. second-class, *vid* Dieppe. But special rates could be obtained for such a purpose, particularly if a large number of tickets were secured. Once on the Riviera, provisions would be found much cheaper than in London, while well-sheltered building land can be readily purchased on the outskirts of the towns. Thus, with respect to house or hospital accommodation, to land and provisions, a very great economy would be realised, which might probably suffice to compensate the cost of the journey. But what would be done with the buildings during the summer months? Nevertheless, we are glad to see the organ of the working classes discussing so eminently practical and useful a question, instead of indulging in visionary propaganda after the style of the continental papers which cater for the same class of readers. At Hyères, by the way, Dr. E. Vidal has for a long time been negotiating with the Paris poor relief administrators for the erection of a hospital for strumous children on a spot of his selection, admirably situated amid a fine wood, and yet exposed to saline breezes from all sides. Here the out-door treatment of scrofulous children, somewhat difficult during the cold months on the borders of the Atlantic, could be continued without interruption throughout the winter. The celebrated French architect and sanitary reformer, M. Emile Trélat, has also urged on many public occasions that better results would be obtained and some economy realised if a portion of the consumptive patients in the Paris hospitals were sent down to the Riviera for the winter. Altogether, therefore, the suggestion of the *Labour Standard* merits full consideration.

RED SWEAT.

IT has long been suspected that the red as well as the blue colour occasionally observed in perspiration is due to the presence of bacteria. In a woman whose sweat, especially in the axillæ, had a red tinge, Hofmann in 1873 found that uniform red masses adhered to the hairs, but he did not ascertain their nature. Pick observed in a peculiar case of skin disease reddish masses of bacteria on the hairs. Eberth noticed bacteria in yellow sweat. Additional observations of the same kind have been reported by Babesiu, of Pesth. A woman twenty-six years of age presented pale-red sweat in the right axilla, where the skin and hair were also slightly reddened. From time to time the perspiration became blood-red in colour, associated with hysterical and nervous disturbances. A sister who slept with her also became affected in a similar manner, the perspiration in the right axilla becoming red. A third case presented itself in a young healthy man, who complained of occasional blood-red sweat; and a fourth in a young woman. In all the symptom was associated with troublesome itching. Microscopical investigation yielded in all the cases a similar result. The hairs of the axilla were thin, pale-red, brittle, and surrounded with a colloid-looking, rusty or bright-red sheath, in places of considerable thickness, and having a rough surface. It consisted of red masses presenting a radiating striation, more or less confluent, apparently proceeding from fibres of the cortex of the hair or from some broken part of its surface. The radiating striation was found to be due to the aggregation of round or ovoid bacteria, scarcely a micro-millimetre in diameter, which were united in zoogloea masses by a reddish intermediate substance. Nodular swellings on the hair were produced by an infiltration of the organism between the separated fibrils. The roots of the hair were free from bacteria. The red tint of the sweat was found to depend upon numerous roundish masses of zoogloea, resembling those of Bacterium prodigiosum. The bacteria were deeply coloured by anilin and hæmatoxylin, and were rendered more distinct on the addition of acetic acid or liquor potassæ, while the zoogloea shrank under the influence of alcohol, ether, and turpentine. Sulphuric acid changed the red colour to violet, and then to violet-blue. In sterilised culture solutions the bacteria multiplied slowly. The conclusions drawn from these observations are that the red sweat often found in the axillæ is coloured by a spherobacterium, the development of which gives rise to an excessive perspiration, and sometimes to brittleness of the hair, itching, and slight tinting of the skin. The red sweat appears to be contagious. The bacteria resemble, on the one hand, the colourless zoogloea found in hair, and, on the other, certain chromogenous bacteria, especially B. prodigiosum, from which it is distinguished by the brick-red colour of the intermediate substance. It is more difficult to cultivate than B. prodigiosum, but gives essentially the same chemical reactions.

THE AMBULANCE SYSTEM.

WE are glad to learn that the scheme for providing public ambulances is finding favour in provincial towns. Greenock has decided to be in the van of this movement, and a strong effort is now being made to purchase one of Dr. Howard's ambulances for that town. The proposal is to lodge the ambulance at the depôt of the Fire Brigade in charge of the Master of Police, and that the members of the Police Force and Fire Brigade should be drilled in its use under the supervision of a surgeon appointed for the purpose. The Fire Brigade depôt is to be connected by telephone with the Greenock Infirmary and the various yards and factories where accidents are most often occurring. We hope this effort will be speedily successful. In connexion with the scheme for London, we would suggest that it might be practicable to utilise the parish infirmaries, at any rate in some districts, as receiving-houses for accidents brought from the more remote parts of the metropolis. In certain cases a sufferer might pass more than one of these institutions on his road to a hospital. We believe the Local Government Board would assent to such a plan, and we are sure the medical officers of these institutions would gladly give their services in such work. One effect of a plan of this kind would be to familiarise the public with these excellent infirmaries, which are now far too little known; while it might also be a step towards having them in some way affiliated to our medical schools, and their splendid fields for clinical study more generally utilised.

QUACK LITERATURE.

A DOCUMENT has recently been forwarded to us, with the statement that it was thrust into the letter-box of a house in a fashionable district, and was found (luckily) by the proprietor himself upon the hall mat. The document in question is the advertisement of a spermatorrhœa quack, and is as obscene as such literature usually is. It is bad enough that filth of this kind should be allowed to be thrust, *nolens volens*, upon any or every unsuspicious youth who may be walking in the streets, but that poison of this class should be surreptitiously introduced into the domestic circle seems to us to amount almost to an outrage. We notice in this particular advertisement paragraphs which suggest that the writer of them is willing, for a consideration, to procure abortion, and we can only hope that the police are upon the track of this and similar scoundrels. The police, we know, have a difficult part to play in these cases, and we can call to mind one instance, at least, in which excess of well-meant zeal got the officers into trouble. Possibly, if the extent of this evil were brought prominently to the notice of the heads of the Government some repressive legislation might result. If

everyone who is thus annoyed would forward the document, with a formal complaint, to the Home Secretary or the Prime Minister, perhaps the "resources of civilisation" would be put in operation.

THE POSITION AND MOVEMENTS OF THE STOMACH.

ACCORDING to Dr. Leshaft, the Professor of Anatomy at St. Petersburg, the statements current in anatomical text-books regarding the normal position of the stomach are erroneous. He has made careful observations on the point in more than twelve hundred bodies, and has arrived at the following conclusions:—The stomach does not, as is usually asserted, lie horizontally in the abdominal cavity, but vertically, so that the fundus touches the diaphragm; the smaller curvature and pylorus are to the right, and the larger curvature is to the left. Its position is in the left hypochondrium, and the situation of the pylorus is in the vertical line formed by a continuation of the right margin of the sternum. If the stomach is enlarged, no one part can be alone displaced, but all parts are equally moved by the distension. The arrangement of the muscular fibres of the stomach is such that food entering it is moved towards the pylorus, where it can be most thoroughly mixed with the gastric juices, and it then passes back along the centre of the cavity to the fundus, where the resistance is least. This movement of the food along the wall to the pylorus, and back again along the centre, is rendered possible by the form of the organ, and it is probable that it is to this movement that the peculiar shape of the fundus is due. As is well known, the fundus is absent in newly born children. Thus the shape of the stomach determines the long retention of food in the organ for the purposes of digestion, and its slow passage through the pylorus. If the transverse colon is distended with gas, it may rise to the left of the stomach, as high as the fourth intercostal space, and even as high as the fourth rib. If the coils of the small intestine are similarly distended, the lower part of the stomach may be pressed forwards, and the stomach may assume a more oblique position. Even a large stomach, accustomed to dietetic repletion, maintains a vertical position, but the pylorus is moved a little upwards and to the right.

THE HOMERTON HOSPITALS.

THE Homerton Hospitals Committee of the Metropolitan Asylums Board have published an answer to the memorial of the Hackney District Board of Works concerning the small-pox hospital of that establishment. Except in regard to two or three comparatively unimportant matters they consider the allegations of the Hackney Board non-proven, and not calling for active interference on the part of the Committee. The report of the Committee is followed by one from Dr. Collie, containing a more detailed examination of the Hackney Board's statements as to an undue prevalence of small-pox mortality about the hospital but outside the precincts. From this it appears that the Homerton Small-pox Hospital was opened for small-pox on February 8th, 1880, "at request of the Hackney Board of Guardians, because small-pox existed in the vicinity of the hospital." Then follows the remarkable sentence: "It will appear from this, then, that small-pox has an affinity for the vicinity of the Homerton Small-pox Hospital wholly irrespective of the latter, and I regret that material is not before me to develop and illustrate this point." We commend this question of local affinities to the Royal Commission on Metropolitan Infectious Disease Hospitals. Evidently it will form an item of importance in the selection of future sites for small-pox hospitals. But here, as in other matters concerning these institutions, the hospital authorities again leave us in the dark, time not serving them to "develop and illustrate" the point, notwithstanding its supreme importance. Dr. Collie again recounts "the striking" immunity of certain of the City of London Union inmates from small-pox, both by proximity and otherwise, but fails to deal with the argument which would naturally arise to his objection when the population so exposed is described, "as amongst a number of persons consisting of children, new-born infants, and young women in confinement, there were likely to have been some susceptible subjects." But surely there was something wanted here about duration of stay in the workhouse, knowledge of persons after that stay, probably a very short one, had come to an end, &c. That other localities in Hackney suffered proportionately as much from the mortality of small-pox as the neighbourhood of the hospital is not to the point. It was not contended that the neighbourhood of the hospital alone suffered, or that small-pox did not follow its usual course in circumstances favourable for its spread.

"MUST."

THE term "must," of course, implies precisely that which we indicated as plainly as possible last week. It is immoderately absurd to speak and write as many otherwise intelligent persons are speaking and writing about Jumbo. That huge animal has just reached the period of full development—though he may grow taller yet—and his mode of life must be changed, for a time at least, unless he is to be most cruelly treated. The notion of keeping this superb creature in confinement, away from his species, and then chaining him to a tree, during the periodical states of excitement to which he *must* be subject, is simply barbarous. It is intolerable that such a proposal should be seriously cherished in any quarter. The Superintendent of the Gardens, Mr. Bartlett, may be trusted; and the Council of the Society has acted most judiciously in the matter. Meanwhile, we do not and cannot believe that it is intended to "drag" Jumbo into the packing-case in which he is to be transported to America. This is probably a false statement made to spur public feeling to a higher point of frenzy than that to which it has already been moved in this supremely silly business. There must be something lacking in the wit of the persons employed, or they would not be baffled in the endeavour to persuade the animal to enter the packing-case. Probably he was scared at the outset. If so, they had better at once substitute a vehicle of a different shape and appearance for that which has been discredited in the eyes of this sagacious elephant.

"THE OTHER SIDE."

THE delight with which a coroner's jury and the reporters of coroners' inquests encounter an apparent act of negligence on the part of the authorities of a hospital is incomprehensible. Even the coroner himself is not always sufficiently careful to eliminate prejudice from the juryman's mind. According to the newspaper reports, Dr. Danford Thomas held an inquest in St. Pancras last Monday on the body of Edward Goddard, aged twenty-eight, a wood-carver, whose death was alleged to have been accelerated by the refusal of the staff of University College Hospital to admit the deceased to that institution. The father of the deceased deposed that on Monday fortnight his son met with an injury while at work, and was taken to the hospital. He was kept waiting for an hour before he was seen by a doctor, although he had injured his head severely and was bleeding very profusely. After a short deliberation the jury returned a verdict that the deceased died from concussion and compression of the brain, and added as a rider their expression of opinion that the deceased should have been instantly admitted to the Univer-

sity College Hospital, instead of being treated as an out-patient. This verdict, it is alleged, was endorsed by the coroner without affording the house-surgeon or other officer connected with the case an opportunity of making an explanation. Had such an explanation been asked, it would have been found that the man Goddard was attended to at once by the dresser, who stopped all bleeding; that the house-surgeon saw the man as soon as he could leave an urgent case of violent hæmorrhage that had just been admitted; that after his wounds were dressed Goddard was detained for some time as a precautionary measure, there being no vacant bed in the surgical wards set apart for men; and, finally, that not only was the man able to walk home, but attended the hospital many days in succession, in order to have his wounds dressed. There is good reason for believing that the report of the inquest was incomplete and inaccurate, and that an early opportunity will be taken to put matters in their true light.

NAVAL COURT-MARTIAL.

WE regret to observe that a naval medical officer, surgeon of Her Majesty's Ship *Cambridge*, at Devonport, has been tried by court-martial for negligent performance of duty and sentenced to be severely reprimanded and dismissed his ship. It appears that an able seaman of the ship was attacked with rheumatism while at his parents' home, and forwarded to his captain a certificate from a civil practitioner that he was unfit to be removed. There is a standing order that persons detained on shore by sickness are to be visited by a medical officer and sent on board, or to the Royal Naval Hospital, as soon as practicable. In the present instance the medical certificate was taken, by the captain's orders, to the surgeon, who instead of visiting the man sent the sick-berth steward to see him. This appears to have been done for three days, at the end of which time the patient was removed to the Royal Naval Hospital. The prisoner in his defence regretted the occurrence, but pleaded ignorance of the captain's orders, and handed in first-class testimonials. Evidence was adduced to show that the patient's removal, though unadvisable, did not involve danger to life. It must be obvious that the conduct of the medical officer in thus delegating a professional duty to an unqualified subordinate was quite unjustifiable, and was in no way covered by the plea of ignorance of the captain's orders. The necessity for visiting men who report themselves sick when absent from their ship will be admitted by all who have had any experience of the service, as without some such check malingering might be carried on to any extent; but, in the interests alike of the service and of the men, the duty of deciding upon the nature and disqualifying extent, or even the existence of the disease, should clearly devolve upon persons competent to form a correct judgment. We have too often evidence in the mistakes committed by the police of the impropriety of entrusting the decision of such questions to unqualified persons, even when there is not the slightest ground to doubt their good faith. But in such a case as the present, where a certificate of a qualified medical practitioner was forwarded, it was not only a neglect of duty but a gross breach of professional courtesy to send a sick-bay man to report whether the patient was in a fit state to be moved. It says little for the interest taken in the case to find that this was carried on for three days, and that at last the sick man was removed to the hospital without having ever been seen by the surgeon who was responsible for the care of him. We trust that this will prove a lifelong lesson to the officer in question, and that his future career may be such as to remove the unfavourable impression produced by his conduct in this case, and the discredit brought by it upon the branch of the service to which he belongs.

THE LONDON HOSPITAL.

THE *East London Observer* of March 4th contains a report of the proceedings of a Court of Governors held on the previous Monday. The chief business was a Report in which Mr. W. J. Nixon dealt with the custom that had hitherto prevailed with reference to the issue of tickets to governors. Mr. Nixon endeavoured to show, first, that the unlimited issue of tickets was a great evil, which was not suspended an hour too soon; and, secondly, that the limited issue of tickets secures for the hospital, in a charitable sense, the selection of the most deserving cases, associated, however, sometimes with the drawback of incurability. Mr. G. F. Dix vindicated the governors from the charge of not issuing letters with discretion, and cited a case in proof. A case of discrimination is suggestive of the dictum that "one swallow does not make a summer." There is no doubt that the governors of both hospitals and dispensaries are apt to use letters without discrimination, often in favour of their own dependents, and to save their own pockets. This is a very questionable kind of charity. It is very natural in the system of voluntary hospitals that the subscribers should wish to have a *quid pro quo*, but this has certainly been used with so much want of discretion as to justify a thorough system of inquiry into the social status of patients. But this, to be done efficiently, would itself involve considerable expenditure and, Mr. Nixon says, re-organisation of existing arrangements. Mr. Kitto's view of the hospital was that it should be a consultative institution. This view would greatly restrict the usefulness of the hospital, either for the poor or for students, and for the East End of London is too doctrinaire.

NETHERFIELD INSTITUTION FOR INFECTIOUS DISEASES, LIVERPOOL.

THE sixteenth Report of this Institution has just been issued, and shows that during the past year 213 patients were admitted, suffering principally from small-pox and scarlet fever. The resident medical officer, Dr. E. W. Hope, directed attention to the great importance of sending patients at the earliest possible stage of the disease from which they suffer. Of the 213 cases admitted, 32 died and 175 recovered. The average number of patients in the institution at any time during the year was 22, the average duration of stay being six weeks. Dr. Hope remarks on the evidence afforded by the cases of small-pox of the protection afforded by efficient vaccination: "Amongst the non-vaccinated the illness was in every instance long and severe, and recovery was accompanied with great permanent disfigurement; but amongst the imperfectly vaccinated the severity of the disease diminished in proportion to the efficiency, as evidenced by the scars, with which vaccination had been done." The Committee are hopeful that from the increasing admissions into the hospital of late years, it is becoming better known and appreciated in Liverpool, for the Netherfield, like the London Fever Hospital, has laboured under the disadvantage of having had its merits very imperfectly understood.

THE EDINBURGH UNIVERSITY ENDOWMENT ASSOCIATION.

THE Edinburgh University is one of the most thriving institutions in the world. But its very success makes it needy. It has received in the last fifteen or sixteen years, since the foundation of the above Association, large funds both from Government and from the public, and it has used these well in the erection of noble buildings, class rooms, museum, laboratories, &c. But it wants many more thousands yet for open bursaries, and for a large hall in which

the great ceremony of capping can be worthily celebrated. Sir Alexander Grant, at the annual meeting, made a powerful appeal for funds for such general purposes, and grateful Edinburgh men will do well to respond to it.

THE ROYAL MEDICAL SOCIETY OF EDINBURGH.

THIS old and respected Society held its annual dinner at the Waterloo Hotel, Edinburgh, on February 28th. The company was presided over by Dr. R. M. Johnston, and the second President, Dr. Maxwell, officiated as croupier. The President's speech was worthy of the occasion, and gave an interesting account of the long and honourable history of the Society. The croupier was not so happy, and fell back on abuse of the Government for being desirous of amending the method in which medical men were educated and examined. No Government could have a more creditable wish. The Principal of the University, Sir Alexander Grant, took far worthier ground, gently rebuked the croupier for his forebodings with regard to future legislation, and expressed himself as confident that the Universities of Scotland had nothing to fear from reform.

THE LONDON WATER-SUPPLY.

COLONEL BOLTON, R.E., the water examiner, reports for January, 1882, that the state of the water in the Thames at the intakes of the Companies who take their water from the stream was very bad in quality during the whole of the earlier part of the month; on the 15th it improved in quality, and on the 20th became clear, and remained so during the rest of the month. The water in the River Lea was in a bad condition during the month. These remarks refer to the state of the water previous to filtration. Professor Frankland reports that the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies, although of better average quality than in the previous month, was considerably below the standard of that supplied during the greater part of last year. With the exception of the water delivered by the Grand Junction and Lambeth Companies, which was slightly turbid, the filtration was in every case efficient.

FEES FOR ATTENDING THE LATE PRESIDENT GARFIELD.

THE accounts presented by the surgeons in attendance upon General Garfield have been audited by a Committee of Congress, and have been considerably cut down. Dr. Bliss is allowed £5000; Drs. Agnew and Hamilton £3000 each; Drs. Reyburn and Boynton £2000 each. Surgeon-General Barnes is to be promoted to Major-General, on the retired list, and Surgeon Woodward is to be Lieutenant-Colonel. These amounts seem large, but remembering the long period over which the illness lasted, the extreme anxiety attending it, and the heavy responsibility borne by the doctors, their remuneration is certainly not excessive. The most disproportionate item is the amount paid to the nurse—£1000!

THE SALARY OF THE CORONER FOR DUBLIN.

THE City Coroner, Dr. Whyte, was appointed five years ago at a salary of £300 a year, and recently the Finance Committee of the Corporation recommended an increase of £50 per annum, which they afterwards for some reason or other rescinded. The Under Secretary for Ireland last week informed the Town Council that as they and the coroner were unable to agree as to the amount of salary to be paid the latter, it would become the duty of the Chief Secretary to determine the amount. The Corporation have referred the matter to the Finance Committee for consideration, but as the duties have been very arduous of late, and the present allowance of £300 is about half what is paid for the performance of similar duties in many provincial towns in England, we trust the committee will recommend an addition commensurate to the position of coroner for the city of Dublin.

LONDON HOUSES.

THE report of the London Sanitary Protection Association for the past year showed that of the whole number of houses inspected, in 6 per cent. the drains were entirely stopped up, and all the sewage soaked into the ground under the basement of the houses, there being no connexion whatever with the sewer; that in about one-third the soil-pipes were leaky, allowing sewer-gas to escape through the leaks into the houses; that in about one-third the overflow-pipes from the cisterns discharged into a soil-pipe or drain. No water as a general rule goes down these overflow-pipes, but sewer-air comes up the drains and contaminates the water in the cisterns. The report also shows that more than half the houses inspected had waste-pipes from baths or sinks connected directly with soil-pipes or drains.

THE STAFF OF THE BATH ROYAL UNITED HOSPITAL.

WE recently recorded the appointment of a committee to investigate and report upon the desirability of adding assistant-physicians and assistant-surgeons to the medical staff of the Bath Hospital. The report of the committee was presented at a meeting of subscribers on March 3rd, when it was almost unanimously decided to appoint three assistant-physicians and three assistant-surgeons, to be elected for five years, but to be eligible for re-election. Their duties are to consist in attending to out-patients, and acting as substitutes in the absence of the senior officers. The elections are to be in the hands of a committee. This result, we believe, promises well in the interests of the hospital, the profession, and the public.

THE LOWER THAMES POLLUTION.

A MEETING of the Committee for the Protection of the Lower Thames from Pollution with the Metropolitan Sewage was held at the Cannon-street Hotel on the afternoon of the 7th inst., Mr. Thorold Rogers, M.P., in the chair. The evil was characterised as "a growing and dangerous nuisance to the health of the inhabitants of the metropolis," and a resolution was passed in favour of a Royal Commission being appointed, or a Parliamentary inquiry instituted. An executive committee was formed and empowered to take all the necessary steps to give effect to the first resolution of the meeting.

MEETINGS of the Royal Commission on Small-pox and Fever Hospitals were held at No. 3 Committee-room, House of Commons, on the 3rd and 7th inst. There were present Lord Blachford, Sir James Paget, Sir Rutherford Alcock, Mr. A. W. Peel, M.P., Mr. E. L. Pemberton, M.P., Dr. A. Carpenter, Dr. J. Burdon-Sanderson, Dr. W. H. Broadbent, Mr. Jonathan Hutchinson, and the secretary, Mr. Nathaniel Baker.

MR. HANS IRVINE died at the University Club, Dublin, on the 1st inst. Deceased was a graduate in medicine of the University of Dublin, and an ex-president of the Royal College of Surgeons in Ireland.

THE Senate of Aberdeen University has conferred the degree of LL.D. upon Professor McKendrick of Glasgow.

THE Cambridge Local Examinations, by means of which students may pass the Preliminary Examination required by the General Medical Council, and students proposing to enter the University in October may obtain the certificates which exempt from the Previous Examination of the University, will be held on Monday, Sept. 4th, in Cambridge and London, and at such other places as the Syndicate may determine. Forms of entry, signed, must be sent in before Aug. 1st. They can be obtained, for Cambridge, from the Rev. G. F. Browne, St. Catharine's College, Cambridge; and for London, from R. St. J. Corbet, Esq., 10, Portman-street, W.

MR. MCALISTER, who was Senior Wrangler a few years ago, and is now Medical Lecturer at St. John's College, Cambridge, is directing his attention to the mechanism of the human body, and will lecture, next term, in the Anatomical School of the University, as announced by Professor Humphry, "On the Mechanics of the Human Skeleton."

PROFESSOR FRIERE MARRECO, who for many years occupied the post of Lecturer on Chemistry in the University of Durham College of Medicine, died a few days since in Westmoreland-road, Newcastle.

A SERIOUS outbreak of cholera has been reported at Trichinopoly, and 2457 persons are reported to have suffered from it since the 24th of October, when it first made its appearance.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Bristol (City and County).—Dr. David Davies reports a steady fall of the rate of mortality from 21·4 per 1000 in 1879 to 19·6 per 1000 in 1881. He reports also the proportion of deaths registered among infants under one year old as 126·3 to every 1000 births in 1881, as against 144·5 during 1880 and 145·4 during 1879. "These favourable returns," he observes, "I cannot consider as permanent, subject as they are to disturbance by seasonal influences and other causes not under our control, but they are very satisfactory for the present. We can but hope they may be equally good in the future." Measles and scarlet fever were the most fatal among the principal zymotic diseases during the year, and as to measles Dr. Davies writes, addressing his authority: "As a sanitary authority, you have no means for preventing the spread of it or lessening the mortality from it; even if I had received early notification of the cases, I do not know of any steps that I could have taken to arrest its progress. It has no connexion in its origin with general sanitary conditions; but it is in every case the result of infection from person to person. The majority of the public view it as an unavoidable incident of child life, and do but little to control the spread of it. There are no hospitals for the reception of cases, and no practical compulsory powers for the isolation of children suffering from it. I do not consider that the mortality from it, whether high or low, is any evidence of the sanitary condition of a district, but the fatality of it, where prevalent, is an index of the social and intellectual condition of the people, in proof of which view might be quoted the now historical epidemic in the Fiji Islands." And with regard to scarlet fever, Dr. Davies observes: "With our failures of former years in remembrance, and the complete failure of other large towns during the past year to control this disease, I would allude very diffidently to the effect produced by our action, and with but little assurance of our future; but I do consider that our action in recommending isolation, in watching infected families and houses, and by disinfection of houses and clothing, has lessened to a great extent the mortality from this disease. In preventing infection, our great difficulty is to prevent idle women visiting infected families out of curiosity, and for the love of gossip. Such women generally take their younger children with them to the sick room."

Bilston.—Bilston claims pre-eminence in the Black Country for its sanitary arrangements. Last year its total mortality was at the rate of 16·1 per 1000 of the population, while its birth-rate was no less than 37·1 per 1000.

Monmouth, Rural.—Dr. George Willis returns the area of his district at 82,977 acres, and the population (1881) at 21,549. The population showed a falling off of 1427 since the previous census, owing to the depressed state of the coal and iron trade during the past five years, and the "consequent emigration of miners and colliers to America." The health of the district maintained a high standard during 1881, and the death-rate is returned at 14·30 per 1000 of the population. Few deaths are recorded from zymotic diseases, but it is noted that the district passed through a wide-spread epidemic of measles.

Lincoln, Urban.—Dr. Harrison reports for 1881 for the city a death-rate of 17·9 per 1000, and a birth-rate of 35·7 per 1000. He observes that although the death-rate is remarkably low, "there are several recommendations I have made from time to time I should like to see carried out, such as an improved system of scavenging, regulations as to piggeries, the establishment of a public slaughter-house out of the city, and the abolition of private slaughter-houses." A pretty list of sources of nuisances for one of the principal cathedral cities in the kingdom.

Lincoln, Rural.—Dr. Harrison reports for the rural district for 1881 a death-rate of 18·1 per 1000 and a birth-rate of 31·2 per 1000.

Baildon, Urban (Yorkshire).—Mr. George E. Pollard reports for 1881 a death-rate of 12·8 per 1000 population and a birth-rate of 30·6 per 1000. Referring to the occurrence of cases of typhoid in his district, he observes: "There is, I think, little doubt but that they all arose from the filthy and overflowing privies in their immediate neighbourhood." The privies and ashpits, indeed, seem to be the gravest sanitary defect in his district. "The ashpits," he remarks, "and worse still, the privies, are almost invariably far too full, and in some places I have seen were allowed to be overflowing for a long time; one such which served for six houses had, I was told, not been emptied for nearly three years!" He comments also upon the desirability of enforcing the notification of infectious diseases in sanitary districts.

Andover, Urban.—Mr. Septimus B. Farr reports for this district in 1881 a death-rate of 16 per 1000 and a birth-rate of 33 per 1000. He comments upon the advantages to be derived from an enlargement of the infectious disease hospital and from the construction of a complete system for the disposal of sewage, strengthening his argument in favour of the system of sewerage by the statement that within the year no less than 43 cases of fever had been reported, 7 of them fatal, "the whole being either directly or indirectly the result of imperfect drainage." In other respects much sanitary amendment appears to be wanted in Andover.

Brentford (population in 1881, 11,808).—Mr. Joseph Williams reports for this district during 1881 a death-rate of 18 per 1000 population, and a birth-rate of 36 per 1000. The question of drainage has been before the Local Board, and, assisted in their choice by Captain Galton, a scheme has been selected by which the present sewers and watercourses are utilised for carrying off the rainfall into the river, whilst a new system of sewers is constructed for the house drainage. The sewage will be treated and deodorised on land adjoining the Ealing Sewage Works. An important change has been effected during the year in regard to the water-supply of the district. The Grand Junction Water Company has substituted a constant supply in place of the intermittent system previously in use. Brentford has decided to oppose the scheme of combination for the erection of an infectious disease hospital, which has recently been agitated among several neighbouring authorities, believing that it would be better for Brentford to have a tent or hut hospital of its own. The scavenging of the district, carried out by the Local Board, is stated to have been efficiently performed during the year.

Lymm.—Dr. Makinson Fox reports for this district in 1881 a death rate of 11·7 per 1000 of the population, and a

birth-rate of 31·0. The death-rate, he says, "is the lowest annual death-rate which it has ever been my lot to record in an urban district;" and again he says, "For the year 1881 Lymm has the lowest death-rate of all the sanitary districts, urban and rural, in the Mid-Cheshire combination."

THE RECENT OUTBREAK OF SMALL-POX IN MAIDSTONE GAOL.

Mr. Matthew A. Adams, the medical officer of health for Maidstone, has presented to the Local Government Board a report on the recent outbreak of small-pox in the Maidstone gaol. The outbreak occurred between the 10th and 17th January, was limited to one of the three blocks into which the gaol is divided, attacked ten prisoners, and in no case ended fatally. There was no community of occupation among the several men attacked; they were not associated even in church-going; the food and stores came from the same stock, and the stores had been long in hand. The irregularities of the seizures in the infected block did not favour the notion of a local nidus, and careful inquiries about the nine attendant warders seemed to free them from any chance of communicating the contagion. In fact, Mr. Adams was foiled in his first attempts to throw light upon the means by which the small-pox had got entrance into the gaol. His efforts in searching for inlet by the agency of some short-sentence prisoner, who had been in prison during the period of incubation of the disease and been discharged at the time of its development, were attended with greater success. Twenty short-sentence prisoners had been admitted within the period during which the possibility of contracting the contagion must be assumed. One of these, it was subsequently shown, had before his imprisonment been in contact with small-pox at a roadside inn. On the day he was released from gaol he was taken ill, "being sick and trembling," and in a day or two a rash was observed, which consisted first of "red blotches, some coming to mattery heads," when, feeling somewhat alarmed, he got some medicine from a chemist. Mr. Adams saw this man on Feb. 12th, when there remained indications of where the rash had been. He had a good vaccination scar on the right arm and two good vaccination scars on the left arm. Five of the prisoners subsequently attacked were liable to be brought into close relation with this short-service prisoner on the tread-wheel; others attacked may have come together with him at the general assembly in the work-shed, where the prisoners mingle promiscuously before being told off to their duties, and one admitted the day the short-sentence prisoner was discharged, it is suggested, came in contact with the prison clothes left by the short-sentence man in exchanging his prison dress for his ordinary attire. And thus, through the medium of a short-sentence prisoner, Mr. Adams accounts for the introduction of small-pox into the Maidstone gaol.

The Islington Board of Guardians have passed a resolution urging that the Metropolitan Asylums Board should dispose of the Hampstead Hospital and apply the proceeds in reducing their demand of £240,000 for their next half-year's expenditure. The Board have refused their assent to the application.

The Town Council of Wrexham have resolved that it is desirable to provide accommodation for cases of infectious disease that occur in the borough, and that steps be taken to secure a suitable site for the erection of a fever hospital forthwith.

Dr. Gray, sanitary officer, reported last week to the Armagh Town Commissioners that no case of small-pox had occurred in the town during the past week, and it was probable that the epidemic was now over.

The Clitheroe Rural Sanitary Authority have resolved to close all the schools of the district, on account of the prevalence of measles, from which disease a considerable number of the children are now suffering.

It is proposed to raise a sum of £10,000 for the purpose of constructing new waterworks for Holywood, County Down; and last week an inspector of the Local Government Board held an inquiry in reference to the matter.

For the week ending February 25th there were 137 cases of small-pox in the Belfast hospital for contagious diseases, being a decrease of 18 on the previous week.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5799 births and 3971 deaths were registered during the week ending 4th inst. The annual death-rate in these towns, which in the three preceding weeks had been equal to 29·8, 26·4, and 25·4, further fell last week to 24·5. The lowest rates in these towns last week were 19·4 in Hull and Derby, 19·8 in Leicester, and 20·1 in Newcastle-upon-Tyne; the rates in the other towns ranged upwards to 31·3 in Nottingham, 31·6 in Oldham, 33·8 in Brighton, and 38·2 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 640, showing a slight increase upon recent weekly numbers; 256 resulted from whooping-cough, 154 from measles, 88 from scarlet fever, 49 from fever (principally enteric), 35 from diphtheria, 30 from diarrhœa, and 28 from small-pox. The lowest death-rates from these zymotic diseases occurred last week in Derby and Plymouth; while the highest were returned in Brighton, Blackburn, and Preston. Whooping-cough showed the largest proportional fatality in Brighton and Huddersfield; measles in Preston, Norwich, Bolton, and Brighton; scarlet fever in Nottingham, Hull, and Brighton; and "fever" in Liverpool and Oldham. The 35 deaths from diphtheria in the twenty-eight towns included 14 in London, 7 in Portsmouth, and 5 in Liverpool. Small-pox caused 29 more deaths in London and its suburbs, 2 in Bolton, 2 in Leeds, and one in Manchester. The number of small-pox patients in the metropolitan asylum hospitals has slowly but steadily declined in the past six weeks from 504 to 407 on Saturday last. The new cases of small-pox admitted to these hospitals did not exceed 45 last week, against 67 and 89 in the two preceding weeks. The deaths referred to the respiratory diseases in London, which had declined from 594 to 545 in the three previous weeks, further fell to 470 last week, and were 31 below the corrected weekly average. The causes of 99, or 2·5 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths did not exceed 1·2 per cent. in London, whereas it averaged 3·5 in the twenty-seven provincial towns. All the causes of death were duly certified in Brighton, Portsmouth, Norwich, Derby, and Birkenhead; while the proportions of uncertified deaths were largest in Hull, Wolverhampton, and Salford.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which had declined from 24·7 to 22·6 in the three preceding weeks, further declined to 21·6 in the week ending the 4th inst., and was 2·9 below the average rate in the twenty-eight large English towns. The deaths referred to the principal zymotic diseases in these Scotch towns, which had been 79 and 85 in the two previous weeks, declined last week to 77; of these, 18 were attributed to whooping-cough, 16 to measles, 16 to diphtheria, 13 to diarrhœa, 7 to scarlet fever, 7 to "fever," and not one to small-pox. The annual death-rate from these zymotic diseases was equal to 3·3 per 1000, and was 0·6 below the mean rate from the same diseases in the large English towns. The zymotic death-rate in the eight Scotch towns ranged upwards from 1·5 in Greenock to 4·3 in Glasgow and 8·6 in Perth. The 18 fatal cases of whooping-cough exceeded the number in the previous week by 2, and included 10 in Glasgow and 4 in Aberdeen. The 16 deaths from measles showed a further increase upon recent weekly numbers; 10 occurred in Glasgow and 3 in Perth. The 16 deaths referred to diphtheria corresponded with the number in the previous week, and included 8 in Glasgow and 2 both in Dundee and Aberdeen. Nine of the 13 deaths from diarrhœa occurred in Glasgow; while the 7 deaths referred to "fever" included 4 in Edinburgh. The 144 reported deaths from acute diseases of the lungs in the eight towns were 35 below the number returned in the corresponding week of last year. The deaths of infants under one year of age showed a further increase upon recent weekly numbers.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 36·9 and 33·6 per 1000 in the two preceding weeks, rose again to 35·1 in the week ending 4th inst. During the first nine

weeks of the current quarter the death-rate in the city averaged 35·3, against 26·6 in London and 19·8 in Edinburgh. The 234 deaths in Dublin showed an increase of 10 upon the number in the previous week; 27 were referred to measles, 4 to "fever," 2 to whooping-cough, one to diphtheria, one to diarrhœa, and not one either to small-pox or to scarlet fever. The annual death-rate from these principal zymotic diseases was equal to 5·2 per 1000 in the city; the death-rate from the same diseases was 4·2 in London and 2·5 in Edinburgh. The fatal cases of measles, which had been 33 and 39 in the two previous weeks, declined again last week to 27; the deaths from this disease averaged no fewer than 35 in the first nine weeks of this year. The 4 deaths from "fever" exceeded by one those returned in the previous week; while the deaths from other zymotic diseases were considerably below the average. The deaths both of infants and elderly persons exceeded those returned in recent weeks.

AN EGYPTIAN CENSUS.

A decree has been issued by the Egyptian Government ordaining that a general census of the people shall be taken on the 3rd of May next. One of the clauses of this decree directed that a preliminary census should be taken on the 1st of March throughout Egypt, in order to serve as a basis for, and to secure greater accuracy in, the final census two months later. No enumerator is to be charged with the enumeration of the population living in more than eighty houses, and it is therefore estimated that the operation should be completed in a fortnight. At this preliminary census it appears that the full particulars required concerning each person enumerated will be collected—namely, the name, relation to head of family, sex, age, educational condition, occupation, religious profession, and nationality. The local results of this preliminary census will be placed in the hands of the enumerators appointed for carrying out the final census on the 3rd of May, which will record all persons in residence on the night between the 3rd and 4th of that month. With the preliminary census in their hands, it is presumed that the enumerators will only have to erase the names of those persons who have ceased to reside where they were recorded two months previously, and to add the names of those who have since come into residence. In this manner it is fair to assume that the final and simultaneous census will be effected more rapidly and more correctly than would be possible without the preliminary census. This double and laborious method of taking a census may be absolutely necessary to secure approximate accuracy in such a country as Egypt.

THE SERVICES.

Surgeon-General T. Crawford, Principal Medical Officer in India, leaves Calcutta in the Peninsular and Oriental steamer *Ravenna* on the 12th inst., and will succeed Sir William M. Muir, K.C.B., as Director-General of the Army Medical Department on May 7th. Sir Anthony D. Home, V.C., K.C.B., Surgeon-General of the Madras Army, relieves Dr. Crawford on the 11th inst. of the administrative charge of the Army of India.

Deputy Surgeon-General Moffatt is under orders to proceed to Barbadoes as Principal Medical Officer in the West Indies, vice Deputy Surgeon-General Herbert Reade, V.C., invalided.

Brigade Surgeon David Boyes Smith, Indian Medical Service, retires from the service with the honorary rank of Deputy Surgeon-General.

Surgeon-Major B. Lane, A.M.D., is ordered home from India.

Brigade Surgeon N. Norris, Surgeon-Majors T. Wright, J. Laud, J. B. Kelly, with Surgeons G. T. Langridge and R. W. Mapleton, have arrived from India in H.M. troopship *Serapis*, which left Bombay on the 4th ult. for Portsmouth.

Surgeon-Major Robert A. Malley arrived at Portsmouth from Natal on the 27th ult., in charge of troops, in the steamship *Taymouth Castle*.

Surgeon-Major H. R. Greene, Army Medical Department, has been appointed to officiate as Principal Medical Officer of the Quettah Division.

Surgeon-Major Franklin Gillespie has been ordered to Aldershot on return from St. Helena.

RIFLE VOLUNTEERS.—2nd Ayrshire: Surgeon Robert Dobbie, M.D., is granted the honorary rank of Surgeon-Major.—4th Essex: Arthur Vernon Ford, Gent., to be Acting Surgeon.

ARTILLERY VOLUNTEER CORPS.—1st Fifeshire: Acting Surgeon William Husband Dewar resigns his appointment.

ADMIRALTY.—The under-mentioned medical officers have been promoted:—Staff Surgeon Joshua Pasley Courtenay to be Fleet Surgeon in Her Majesty's Fleet, with seniority of 24th February, 1882; Surgeon Alexander Mitchell, M.D., to be Staff Surgeon in Her Majesty's Fleet, with seniority of 1st instant.

The following appointments have been made:—Fleet Surgeon Stephen Sweetnam, to the *Invincible;* Surgeons Christopher Pearson and Matthew Digan, to the *Alexandra*, additional, for service in the *Invincible;* Surgeon John Mackie, to the *Revenge*, vice Pearson; Surgeons John L. Ahern, Joseph Anderson, and Edward J. Biden, to the *Duke of Wellington*, additional; Surgeons Samuel C. Browne, Charles H. Wheeler, and Edward G. Swan, to the *Royal Adelaide*, additional for Plymouth Hospital; Surgeon William Eames, to the *Indus*, additional.

THE ELECTRICAL EXHIBITION.

THE exhibition at the Crystal Palace is gradually becoming complete, although there is still a good deal to be done before the arrangement of the exhibits can be said to be perfect. There are, according to the catalogue, something over 250 exhibitors at present, and although the number is by no means insignificant, yet, owing to the vastness of the building, the exhibitors are so scattered and so intermingled with the usual stand-holders of the palace that the visitor finds it difficult to justly estimate the extent of the show and the efforts which must have been made to get together so large an assemblage of apparatus. One of the great features of the Paris Exhibition was the wondrous *coup d'œil* which was obtained from the galleries, whence the eye could take in at a glance the almost innumerable applications of which electricity is capable in the present day. The Crystal Palace Exhibition, although much smaller than the one in Paris, is spread over a far greater area, and thus the labour of compassing the latter is very considerable, and demands rather an enterprising spirit on the part of the visitor. There is one point on which the Crystal Palace might well take a hint from the Palais de l'Industrie, and that is the publication not only of a catalogue, but also of a popular scientific guide to the exhibition. The little book entitled "L'Electricité et ses Applications" must have proved invaluable to the visitors of the French exhibition, at least to those who had any desire to look below the surface and to understand the principle upon which the various wonderful contrivances submitted to the eye had been constructed. To the uninstructed in such matters, and even to those who have taken the trouble to master some of the leading facts connected with electricity, the Crystal Palace show is simply bewildering; but a good *guide* (not merely a catalogue), which should tell the spectator what to observe and the order of observing (a most important matter) would do an incalculable amount towards diffusing electrical knowledge through the length and breadth of the country.

No doubt can possibly be left on the mind of the observer that electric lighting is a very solidly established fact, and that it is applicable to almost every conceivable purpose. When Edison first suggested the practicability of lighting by means of incandescent filaments of carbon, the difficulties seemed so numerous that the majority of "practical" men shook their heads and looked upon it as the dream of an enthusiast. Now, however, the imitators of Edison are springing up on all sides, and incandescent lamps of all patterns (Edison, Swan, Lane-Fox, and Maxim) are to be

found at Sydenham by hundreds. It is evident, also, that the æsthetic side of electric lighting has made great progress even in the short period which has elapsed since the Paris Exhibition, and nothing is more remarkable than the exceeding beauty of many of the designs for the electric lamps and chandeliers. The beautiful design of the chandelier in the concert-room, made, we believe, by Messrs Verity, and which represents a bouquet of flowers, is sure to command attention. The designs shown by Messrs. Powell, of the Whitefriars Glass Works, are also very chaste, and it is certain that the opportunity of using these elegant apparatus will help not a little to popularise the electric incandescent light for domestic purposes. In the matter of æstheticism the electricians have run clean away from the gas engineers. Everything connected with gas seems doomed to be hideous. Gas-holders disfigure the landscape, the odour offends the smell, the smoke blackens our rooms, and the designs of gaseliers have never risen above the level of bare toleration; for from the first till now Vulgarity has marked them for her own. One word as to the name to be given to the apparatus for displaying the light. We notice that one of our contemporaries has employed the word "electrolier," with the idea of assimilating it to the word "chandelier," which has become familiar to us in its arbitrary sense, although, according to the French dictionaries, it means a candlestick, or a tallow-chandler, as the case may be. If the termination *ier* is absolutely necessary, why not speak of an electric "luminier"? How would "electric photofer" do? Not very well, we think, although better than "electrolier." The only question with regard to the incandescent light is the one of cost, and this time will solve. It must remain a luxury for some time to come, we think, at least if we are to judge by the formidable array of steam- and gas-engines which are on duty in the Palace to put in motion the various dynamo-machines which generate the current used for illuminating purposes.

Various kinds of arc lights are also exhibited—Brush, Siemens, Jablochkoff, &c., the most notable being one of 150,000 candle-power exhibited by the Anglo-American Company.

The hygienic advantages of the electric light are so obvious, and we have dwelt upon them so often, that it is not necessary to return to the subject.

Nothing shows the enormous strides which have been made in Telegraphy better than the exhibits of the Central Press Association. Under a glass case in the nave is an electric automatic printing machine, by the side of which is a coil of ribbon-paper. This machine has nobody to look after it; it takes care of itself. The ribbon-paper passes through it and falls, printed with important news, into a paper basket placed beneath; any of the passers-by being free to read what they choose. In our interview with this highly intelligent piece of mechanism it informed us of the odds "t. and o." on some of the favourites for the Spring handicaps, and that Mr. Bradlaugh's contest at Northampton was at that moment causing no little excitement among the burgesses of that enlightened borough.

The exhibits sent by the Post Office and the War Office are certain to attract attention; but the former more so to the practical electrician than to the public at large.

The historical apparatus is worthy of attention. First among these is a model of Ronalds' Electric Telegraph, which was laid down by Sir Francis Ronalds in his garden at Hammersmith in 1816. This was a dial telegraph. Two dials (separated by a wire) were made to rotate synchronously by clockwork. When a letter which it was desired to transmit appeared at the opening in the dial at the sending end, a charge of statical electricity from a Leyden jar was transmitted to the receiving end, which caused two pith balls to diverge, and thus to indicate the letter. In this way, by spelling out words, conversations were held. The wires used were of copper, encased in glass tubing, and enclosed in a tarred wooden trough.

The Norwegian Telegraph Department have sent two stuffed woodpeckers, which have pierced a telegraph-pole in search of food. The explanation of this phenomenon, which is by no means uncommon in Norway, is as follows. The woodpecker feeds on insects which it finds under the bark of decayed trees; and it is supposed that the bird is deceived by the humming sound emitted by the telegraph post into the belief that the sound proceeds from insects concealed in the wood; and that he is not undeceived until the perforation is complete, and daylight, instead of insects, is disclosed to the astonished and disappointed bird. Mr. Nielson, the Chief Director of Telegraphs at Christiania, further states that bears are very troublesome to his department, as they not unfrequently scatter the heaps of stones which are used to support the posts. The bear's fondness for honey is supposed to explain this proceeding; and his operations are performed under the belief that the humming sound proceeds from a bee's nest buried in the earth.

The exhibition of electrical apparatus suitable for medical use is situated in the Western Gallery. The exhibits of the best known manufacturers were covered up at the time of our visit, so that we must deal with them on a future occasion.

We are unable to advise our readers as to the best time of day to visit the exhibition. If it be desired to see the effect of the electric light the evening is naturally the best time, but if the visitor wishes to examine the details of articles exhibited he should be sure to go when the attendants are on duty. This, we suppose, is "when the exhibitors choose;" but we think the public would be grateful for some information on this head, as it is not pleasant to find, as we did, that at 5 o'clock in the afternoon no one was at hand at many stalls to give necessary information.

ROYAL COLLEGE OF PHYSICIANS, LONDON.

AT a meeting held at the Royal College of Physicians, London, on Tuesday the 7th inst., the President alluded to the recent attempt to assassinate the Queen, and it was unanimously agreed that an address should be drawn up and presented to Her Majesty, and a Committee of Fellows was appointed for that purpose. The President was requested to undertake the duty of writing a letter of condolence to Sir George Burrows expressing the sympathy felt for him by the College on his recent bereavement. The thanks of the College were directed to be sent to Dr. Waller Lewis for the portrait of Dr. Caius, a copy from the original in the dining hall of Caius College, Cambridge. This is the first time that the claims of this eminent physician have received recognition outside the walls of his own College. For, notwithstanding the immense aid he gave to medical and to national education, and the strenuous exertions in which he engaged during the seven years of his presidency at the Royal College of Physicians in establishing the discipline which made the College so famous and respected during the early portion of its career, and as the defender of its privileges against the encroachments of the barber surgeons, and the originator of its Annals, no memorial of him existed within the walls of the institution till the recent gift of Dr. Lewis, though nearly every other president is represented. It was also determined to make adequate provision in the premises of the College for examining candidates for the licence in Practical Chemistry. This step has been rendered necessary by the increasing numbers coming forward for examination, which render it difficult to find sufficient accommodation outside the walls of the College, as has hitherto been done. Lastly, progress was made in considering the revised edition of the by-laws and regulations which were submitted by the Council to the Fellows at the meeting of the College held Feb. 23rd, and a summary of which appeared in our columns last week. An animated discussion ensued upon the propriety of enforcing an examination in Latin on all candidates for the membership, but the general opinion of the meeting was that the question had better be left to the Censors' Board in each case to decide whether to require it or not.

ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council of the Royal College of Surgeons, held on Thursday last, the formula of the standing rule relating to referred candidates was altered. Henceforth a candidate referred for three months at the first Membership will be required before re-examination to produce a certificate that he has pursued his anatomical and physiological studies to the satisfaction of his teachers during the three months, and not necessarily, as heretofore, that he has dissected for that time; while a candidate re-

ferred for six months will have to produce a certificate of having dissected for three months, and pursued his anatomical and physiological studies to the satisfaction of his teachers for the whole period of six months.

Mr. Heath's motion, to the effect that no candidate be admitted to the Final Membership until after the expiration of two years from the date of his passing the anatomical and physiological examination, was referred for consideration to a Committee, consisting of Messrs. Birkett, Savory, Holmes, Wood, Bryant, Smith, and Heath, to report thereon to the Council.

It was resolved to present a humble address of sympathy and congratulation to Her Majesty on her recent escape from the hands of her would-be assassin.

QUEEN CHARLOTTE'S HOSPITAL.

THE following *résumé* of a year's work in the Out-patient Department is forwarded by Dr. Percy Boulton:—The number of women delivered at their own homes was 608, and all have made good recoveries. The number of children born was 609; one case of twins, dead. Of the 607 remaining children, 587 lived, and 20 were still-born, or died shortly after birth. The following complications required special treatment: One case of accidental flooding before labour; two cases of placenta prævia, in one of which flooding took place at the seventh month, necessitating premature delivery; three high forceps deliveries, in one there was a very large acephalous fœtus, with a hæmatoma growing from the vertex, and no expulsive efforts; two cases of turning for arm and funis presentations; two cases of adherent placenta; and two cases of flooding after labour from uterine inertia.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Lords on Monday, it was resolved, on the motion of the Marquis of Salisbury, to print the Statutes laid on the table this session by the Oxford and Cambridge University Commissioners.

Patent Medicines.

On Thursday, the 2nd inst., Mr. Warton gave notice that, on going into Supply, he would call attention to the sale of patent medicines, and move a resolution. Several notices of opposition to the Rivers Conservancy and Floods Prevention Bill were put down; and Mr. Heneage intimated that he will move to refer the measure to a Select Committee.

Private Lunatic Asylums.

On Monday, Mr. Corbet asked the Attorney-General for Ireland whether, considering the very unsatisfactory arrangements at present existing for the care, maintenance, and medical treatment of insane persons who are detained in private houses in Ireland, under the Acts 5 and 6 Vic., c. 123, and 38 and 39 Vic., c. 67, and the admitted evils connected therewith, he will advise Her Majesty's Government to bring in a Bill to abolish altogether the system of lunatic asylums kept by private individuals for personal gain in Ireland, and to substitute instead a system of self-supporting institutions under the management and control of paid officers, whose only pecuniary interest in them would be the salaries attached to their respective offices. Mr. Johnson replied that this was a question of policy, and therefore it should be addressed to a member of the Cabinet.

The Murder of Dr. Maclean.

Sir C. Dilke stated to Mr. Macintosh that a representation was to be made to the Chilian Government with regard to a claim made by the representatives of the late Dr. Maclean, physician to the British Minister, for compensation for his murder by Chilian troops on January 13th, 1881.

The Alkali Works Regulation Act.

Mr. Dodson informed Sir R. Cross that the attention of manufacturers had been officially drawn to the provisions of the Act, and four new sub-inspectors had been appointed. The time for registration would not expire until the end of this month.

A petition in favour of Mr. H. Gladstone's Union Officers Superannuation (Ireland) Bill was presented from the Royal College of Surgeons in Ireland. A return was ordered of the number of factories and workshops inspected and not inspected during the year 1881.

Dwellings for the Poor.

On Tuesday, Mr. Firth gave notice of the following question to the Home Secretary:—On Friday, to ask the right hon. gentleman whether he is aware that the various railway, market, and other schemes affecting London, now before Parliament, involve the removal of more than 20,000 of the poorer classes of the metropolis; and whether, pending the constitution of a public body able and willing to protect the interests of the metropolitan poor, he will provide for the insertion into these measures of clauses preventing the demolition of houses now occupied by the poor until proper accommodation for the number scheduled for removal has been provided in the neighbourhood, such clauses to be of at least equal stringency to Clause 33 of the Metropolitan Street Improvement Act, 1877.

On Wednesday, Mr. Redmond gave notice that he would ask the Chief Secretary for Ireland whether, in view of the prevalence of small-pox of a very virulent type in the district of Armagh, he will order the removal of the suspects from Armagh gaol.

On Thursday, a petition was presented by Mr. O'Shaughnessy from medical officers of Limerick in favour of the Superannuation Bill. Lord Emly brought in a Bill to amend the law relating to the burial of suicides. A return was ordered of a memorial which has been addressed to the Treasury respecting the sanctioned importation of sundry vegetable matters, as coffee. The case of Dr. Kenny was the subject of a further question by Mr. Gray, to whom the Attorney-General for Ireland replied that if Dr. Kenny were reinstated as medical officer of the Dublin Union his ten years' service would count towards superannuation.

Correspondence.

"Audi alteram partem."

THE UNIVERSITY OF LONDON.

To the Editor of THE LANCET.

SIR,—In your last week's issue a keen and vigorous satire upon the University of London appears from the pen of my old teacher at St. Bartholomew's, Dr. Wickham Legg.

In spite of the reverence one feels for the genius of a preceptor, one cannot but think the objection raised against the "degraded title" and the mode of meeting it tend to diminish the effect attempted. I cannot but look upon the course adopted by Dr. Legg as a renewal of the policy of the Dutch, who cut down most of the precious trees in the Spice Islands in order to raise the value of what remained. The nineteenth century intelligence plumes itself on the vast field it covers, and not on the depth of soil; ambition expands this course.

Surely the inculcation of knowledge into the "weaker vessel," be it even from the field of physiological and pathological research, cannot break down the (happily in our land) time-honoured social element of respect which exists between the sexes. The removal of the misty penumbra of ignorance, as a barrier around our rational perception, I consider not deplorable; yet the education of women should be modified. Victorian admired Preciosa for her infinite affection rather than finite intelligence. Home is woman's sphere. The ethical end is defined as the greatest good to the greatest number. Surely this is not obtained by the injudicious cerebral training so much in vogue at the present time, when women's brains,

> "With knowledge cramm'd, as fattening fowls they force."

Does not the great increase of lunacy and the cry for "accommodation" point sternly to the direction we are going? Are we hastening to a national calamity? a puny progeny—a short-lived, under-grown, nervous, cataleptic race? Is not the advancement of effeminacy and the consequent decline of the Roman Empire a historical warning?

The whole question of woman's place has been overwhelmed with a storm of invective; but is not *pour faire parler de nous* still their motto? Let men treat with disdain the hot-headed blue æsthete, and turn their admiration and

noble protection to the type of the true domestic British mother, of which a better illustration can never be found than in our own Royal family. We entertain no apprehension of danger so long as women retain their sphere; we dread only the discredit of their injudicious minds.

Dr. Legg may now claim to be insensible to fame and obloquy:

"Ill may such contest now the spirit move
Which heeds not keen reproof nor partial praise."

But I deprecate the course he has adopted as an unnecessary infliction upon himself for the unstable aspirations of a feminine mind and the yielding of a point fostering the very essence of their cause.

May the love of domestic bliss be infused more largely into our seemingly half-savage Haidees.

I am, Sir, your obedient servant,

Earlswood, March 6th, 1882. ROBERT JONES, M.B. Lond.

To the Editor of THE LANCET.

SIR,—To allow Dr. Wickham Legg's letter to pass unnoticed would be as great a sin as to make the unwarrantable use of the name of Sir William Jenner that he has done. It is a pity that, before he penned his extraordinary epistle, he did not take care to ascertain the correctness of his facts, and to comprehend aright the remarks in THE LANCET, the misconception of which appears to have been the exciting cause of this sudden volcanic outburst. Let him refer to the Medical Directory, and to the Register, and he will find that it is in the latter that Sir William Jenner does not appear as M.D. Lond., probably because in 1859 he had no object in registering more than one qualification. While in the Directory for 1882 he will detect the insertion of the "degrading title," of which Sir William does not, after all, appear so very ashamed. Why should he? No doubt THE LANCET would be willing to afford the space necessary for the insertion of the names of those who are ashamed of their university. Probably one line would be amply sufficient.

I am, Sir, yours, &c.,

March 4th, 1882. M.D. LOND.

THE DANGERS OF CHLOROFORM AND THE SAFETY OF ETHER AS AN ANÆSTHETIC.

To the Editor of THE LANCET.

SIR,—I am greatly pleased to think that my former letter has had some effect in directing particular attention to this important subject. Many of the suggestions, as mentioned by your various correspondents, are most valuable in demonstrating the real dangers that attend the administration of the different anæsthetics at present in use. I am quite agreed that a fatal result may follow, no matter what agent is used. However, what I did assert, and what I still assert, is that ether is the least dangerous. I am at the same time aware that if etherisation is pushed too far death may follow, as it does during the administration of other agents; but as far as I know there is nothing in ether obnoxious to human life; and when pushed in anæsthesia to its greatest limits, its action appears to affect the respiratory movements only. And in those very few cases recorded where a fatal result followed its administration, it was found that death occurred by the failure of the respiratory movements, the heart's pulsations continuing generally for some time after respiration had ceased. From this it will be seen that ether has a stimulating, not a depressing effect on the heart, as is the case in chloroform; furthermore, ether gives *warning*, as indicated by the condition of respiration, and by removing the ether and at once setting up artificial respiration the weak point is promptly acted upon. Whereas in chloroform the heart can be only influenced in this way through the respiration, and time is therefore frequently lost in attempting to avert a fatal issue.

As regards the use of chloroform in obstetric practice, my letter in no way conveyed the idea that I wished to withdraw it entirely from the Pharmacopœia as a therapeutic agent; I merely alluded to its being used in producing complete anæsthesia during the performance of serious surgical operations where ether would suit all purposes quite as well. The apparent haphazard way of administering choloroform, regardless of quantity or mode of administration, without a fatal result is certainly remarkable; but, in my opinion, it is no reason why an endeavour should not be made to observe the greatest caution in administering an agent like chloroform, which has proved fatal in so many instances, even when it has been given with the greatest care, and by the most experienced hands. As regards the best form of ether inhaler, I mentioned the one made for me by Coxeter, London, as I considered it the most suitable, combining as it does so many advantages—viz., simplicity, portability (can be carried in the pocket), ease of administration, besides being very moderate in price. I am ready to admit that other inhalers possess advantages as well, and I have no doubt may be as efficient in other hands.

With reference to what has been said about the irritating effects of the ether vapour, this is no doubt experienced by some patients during the first few inhalations, but when the ether vapour becomes warm this effect soon passes away. With a little coaxing and management, and heating the inhaler so as to warm the vapour, I feel sure few patients will refuse to submit to its influence. In fact, I never saw a patient yet who could not take ether.

Mr. Swain, of Plymouth, speaks in favour of bichloride of methylene. I regret to state I cannot agree with him in the view he has taken regarding its safety. The statistics on the subject prove the contrary, as will be seen in the table I append, which is the combined result of statistics collected in America by Dr. Andrews, of Chicago, and those collected in England by Dr. Richardson, as mentioned by the late Professor Morgan. In this table will be seen at a glance the absolute and relative mortality caused by the several anæsthetic agents generally used.

Agent employed.	Deaths.	Admins.	Deaths.	Admins.
Ether	4 in	92,815,	or 1 in	23,204
Chloroform	53 in	152,260,	or 1 in	2,873
Mixture of chloroform with ether	2 in	11,176,	or 1 in	5,588
Bichloride of methylene .	2 in	10,000,	or 1 in	5,000

From the foregoing table it will be seen that chloroform appears to be eight times more dangerous than ether, twice as dangerous as a mixture of chloroform and ether, and, as far as we can judge, more dangerous than bichloride of methylene. With such facts and figures before one, the surgeon must necessarily incur grave responsibility if he permits without very good reason a fellow-creature to be suddenly precipitated into the mysterious sleep of insensibility, never to wake again, by means of an agent that has been proved to be eight times more dangerous than ether. No matter what the issues are, he certainly cannot be said to have given his patient the best chance by discarding what statistics have proved to be the safest anæsthetic in use.

I am, Sir, yours truly,

LAMBERT H. ORMSBY, M.D., F.R.C.S.,
Surgeon to the Meath Hospital, Dublin.

Merrion-square West, Dublin, March 8th, 1882.

To the Editor of THE LANCET.

SIR,—It is remarkable that so able a surgeon as Mr. Swain should be induced to give up the use of ether after one (happily averted) accident, while he regards with equanimity the long list of chloroform deaths. Within the nine short weeks of the present year no less than seven deaths from chloroform have occurred. During the whole of last year only two deaths were directly attributable to ether.

It cannot be too strongly maintained that in a question of this kind personal experience of one man goes for very little. In every discussion on this subject we hear, "I have given chloroform three, four, or five hundred times without a death, therefore it must be a perfectly safe agent." The question must be decided by statistics—not of hundreds, but of tens of thousands of cases. It would be easy to produce evidence of most skilled persons of directly contrary nature—"I have had two or three deaths in five hundred cases;" but neither assertion would be worth much. In twelve hundred cases of ether administration I have had to perform artificial respiration twice; in a hundred cases of chloroform I think four times.

As to methylene, which Mr. Swain proposes to use in future:

1. It belongs to the class of chlorinated compounds which

Dr. Richardson's experiments led him to regard with such distrust.

2. It is of so unstable a nature that unless a freshly made specimen is opened for the first time for each operation, it will probably be a mixture in unknown proportions of methylene and chloroform.

3. Though it has been very little used yet, ten deaths have occurred through its agency in the past ten years. It appears to resemble chloroform closely in its physiological properties. Would it be too much to expect that one of the Medical Societies should appoint a committee to collect statistics on the subject, with reference to the number of administrations of anæsthetics, and deaths occurring in, at all events, our principal hospitals? Ether is in general use in most of our great centres of disease, and must be given yearly to patients amounting to tens of thousands. Surely it is time we came to some conclusion on the subject.

I am, Sir, yours, &c.,

Leeds, March 7th, 1882. ERNEST H. JACOB, M.D.

VENTILATION IN TUNNELS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of last week a reference is made to the "Chemical Lung" and its probable utility during the construction of the Channel Tunnel. It may interest some of your readers to know what the "lung" has done, and also what I believe it capable of doing.

A "chemical lung," or punkah, 4 ft. by 2½ ft., was suspended in a room, carefully freed from any possible means of ventilation, on the basement of my house. The room measures 18 ft. by 15 ft., being 8 ft. 6 in. high. A gas-stove with fifty jets and a gas-burner were lighted one hour before the meeting of fourteen medical and scientific men, raising the temperature to 82°, and loading the air with a corresponding amount of impurities. When we were all shut in the room a quarter of an ounce of sulphur was burnt on live coals and half a pound of chalk was treated with muriatic acid, thus adding to the impurities until my visitors sued for mercy. The "chemical lung," or punkah, was then set in action, and in ten minutes the temperature was reduced to 65°, and the room freed from all impurities, the atmosphere feeling light, fresh, and enjoyable. It was then suggested that fat should be burnt, in order to test whether the "lung" removed organic as well as chemical impurities. Accordingly, a shovel of hot coals was introduced, on which beef-dripping was freely sprinkled, with a result easily imagined. In a few minutes the room was insufferable, and during the moment it took to open the door, in order to rush across the passage and cast the offending coals into the garden, the whole house was pervaded by the stench. Very quickly, after the "lung" began its work, the atmosphere of the test-chamber became endurable, and in thirty minutes it was *pure*, while the house itself remained for several hours strongly impregnated with the odour. Some of the gentlemen then smoked, but while the odour clung to the clothes the atmosphere itself was rapidly freed.

One such lung has for several weeks kept the sick chamber of a lady, on her return from wintering at Hastings, perfectly free day and night of all carbonic acid and organic impurities, as evidenced by the chemical reaction of the residual fluid of the "lung." On entering the chamber a deep inspiration is involuntarily taken on account of the freshness of the atmosphere. What I maintain the "lung" *can do*, in one or other of the many forms it may assume, is, that the air of any tunnel, hospital, or hospital ward, of any church, theatre, or mansion, of any room, be it large or small, may be deprived of all its chemical, organic, and inorganic impurities, without causing any draught, while the temperature can be regulated at pleasure, both the expense and labour being trivial. In tunnels an exception must be made to carbonic oxide. This gas is affected by no chemical agent that could be brought to bear upon it; but it may by heat be readily converted into carbonic acid, and thus removed; but it ought not to be generated at all, since a little care on the part of the driver may almost entirely prevent it. It is to test the correctness of these assertions that I challenge *practical* criticism.

I am, Sir, yours truly,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, N.W., March, 1882.

"POST-PRANDIAL MEDICAL ETHICS."

To the Editor of THE LANCET.

SIR,—I was sorry to see the remarks which appeared in THE LANCET of Feb. 25th, with regard to my medical dinner, and which have been copied into the local papers here. If my desire to get medical men to act *honourably* to each other was wrong, then you were perfectly right in denouncing it; but I always thought, and *still* think, that THE LANCET seeks to maintain the honour of the profession. Whatever it may think or say, I had the approval of the President of the College of Surgeons of Edinburgh, Dr. Roberts of London, Dr. Phillipson of Newcastle, Dr. Myrtle of Harrogate, and Mr. Teale of Leeds, with a host of other eminent men, for having discussed ethics at dessert.

We did not "wash dirty linen," but we considered the best way of bringing moral pressure to bear upon those medical men who act dishonourably. I can assure you that good will result from my dinner-party through the South Durham and Cleveland Medical Society.

I am, Sir, yours sincerely,

Stockton-on-Tees, March 2nd, 1882. JOHN FARQUHARSON.

*** We are grateful to Dr. Farquharson for thinking and determining that he "will" think that THE LANCET has some concern for the honour of the profession. We are quite ready to reciprocate the compliment. But we are not converted to the notion that a private dinner, with men of other professions present, the report being published in local newspapers, along with the abortive discussion of the doings of a few members of the profession, was the proper way of dealing with breaches of medical ethics. Dr. Farquharson, like any other man, is at liberty to entertain his friends, or even his enemies, but not to announce a private dinner in the newspapers, and take occasion of it to give unnecessary importance to persons who ostentatiously parade their success. The soundness of our view was shown by the impotence of the discussion, and the adjournment of it to a different meeting.—ED. L.

THE EDUCATIONAL REFORMS IN THE IRISH COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—I regret to observe that your columns have been utilised by one or other of the two opponents of the new educational scheme of the Irish College of Surgeons to misrepresent the purpose and the importance of the two deputations which waited the week before last on the Home Secretary. The real truth is that the president, vice-president, two ex-presidents, and myself, a councillor of the College, were deputed by the College council to explain to the minister that we wanted his approval of the annulling of certain by-laws which are inconsistent with the scheme.

It is not true that the Home Secretary's sanction is necessary to the annulling of any by-law of the College, but the council, nevertheless, thought it inadvisable to put their new regulations in force until the responsible minister had been informed of their intention to do so.

After this deputation had been received, as officially representing the College, two gentlemen were received as claiming to represent a body of Fellows opposed to the reform. It may, however, be doubted that they represented anyone but themselves, considering, after the most vigorous whipping of the Fellows, the most earnest importunity that they would accompany the counter-deputation, and after much boasting as to the importance of the coming demonstration against the new scheme, that one Fellow, and one only, Mr. Ormsby, could be induced to follow the leader of the opposition. Driven to extremities to make a decent show before the Home Secretary, these two gentlemen drove about London entreating Fellows of the College there resident to join them in their interview, with the result that a naval surgeon, who was entirely ignorant of the contemplated reforms, was induced to go as far as the House of Commons, but declined to go further or to see the Home Secretary at all.

This, Mr. Editor, was the important deputation which THE LANCET is used to announce before the profession. There is, indeed, now no party worthy of the name opposed to the contemplated reforms, the small band of Fellows who formerly resisted them having melted away since they had the opportunity of examining the new scheme for themselves. The merits or demerits of that scheme I shall not discuss with Mr. Ormsby. It is enough to say that it has been debated over and over again, line by line, by those at least as competent as Mr. Ormsby can be to judge of the value of the reforms and their effect on the College, and, by sweeping majorities, every successive point in it has been established.

All these statements I vouch for; and I therefore regret that so influential a journal as THE LANCET should permit itself to be made use of for the dissemination of reports which are not accurate.

I am, Sir, yours, &c.,
ARCHIBALD H. JACOB, M.D. Dub., F.R.C.S.I.
Ely-place, Dublin, March, 1882.

ROYAL MEDICO-CHIRURGICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—Dr. Barclay's presidential address at the annual meeting of the Medico-Chirurgical Society was marked by so much good taste and kindliness, and showed so nice a sense of the honour of the profession, that there is the less danger of being misunderstood in expressing an opinion, which I share with many others, as to the desirability of giving a wider scope and more practical purpose to these annual discourses by relieving the President of the duty, which long custom imposes, of supplying a complete obituary notice of all Fellows of the Society who have died during the year.

Long before the annual address is delivered the lives of the more eminent of the deceased Fellows have been written, for the most part by their personal friends. As for the rest, it is of small interest to the general body of Fellows (although it requires much labour and research on the part of the speaker) to learn that So-and-so was educated in London, that beneath a rough exterior he possessed a kind heart, and that while blameless in all relations of life, he yet contributed nothing to our Transactions. The memories of these men, whose fullest life may possibly have been spent apart from their professional employment, can be safely left to relatives, who best know when, where, and how to speak of them.

Those who have listened to these narratives on former occasions will recall certain features, happily absent from Dr. Barclay's address, on which the wearied attention was wont to settle: the interest of pathological details, for instance, wholly impersonal, yet given with much particularity, as to a professional audience, and in each instance, as the end of life was seen approaching, the waiting to know whether the individual had passed away "without contributing anything to our Transactions." What is always uppermost in my own mind at these annual meetings is the mode in which my own character and deportment will be dealt with from that same chair. I reflect how much I am misunderstood by those who know me best, and mentally compose a short obituary, which I should put in writing but for the hope that before my time comes this practice of rehearsing the annual death-roll may have ceased.

What I venture to suggest is, that the time of the Society would be better employed, and the President's task much lightened, if in place of these obituary notices the annual address were occupied with a review of the progress of medicine during the past year, especially with reference to the work of the Society in aiding such progress. A review of this kind would properly include some mention of those Fellows recently deceased who had been prominent workers; the bare mention of the names of the others would suffice. In this way we should gradually accumulate a series of essays representing the history of scientific medicine, together with the expression of contemporary opinion from the lips of its most eminent representatives.

I am, Sir, your obedient servant,
March 2nd, 1882. A FELLOW OF THE SOCIETY.

PARIS.

(From our own Correspondent.)

THE Ministers of State in France have immense power, almost unlimited in their respective departments. This has certain advantages, but it has also its drawbacks, as the power thus vested is frequently misapplied if not abused. For instance, it is stated in a semi-official paper that the Minister of the Interior, who has the hospitals and asylums under his control, proposes in future to appoint naval medical officers of long standing to the medical charge of lunatic asylums. Such an arrangement is simply as preposterous as it is incomprehensible, and will certainly cause great discontent, not only among the medical men who have made mental affections their special study, but among the public, who have a right to exact certain guarantees on the part of those who officially practise the art of medicine.

Mental affections are greatly on the increase in this country, as shown by a report lately submitted to the Prefect of the Seine. In this report we learn that during a period of seventy-four years—viz., from Jan. 1st, 1801, to Dec. 31st, 1874—the number of lunatics in the department of the Seine alone had increased sixfold, the increase of the population being at the same time kept in view. The study of the etiology of these affections is very interesting; it is shown by the above report that heredity and the abuse of intoxicating liquors have been the two principal causes. Celibacy produced a greater number of lunatics than marriage, and the disease was more frequent between the ages of thirty and forty than at any other period, and the male sex furnished a greater contingent than the female.

Whether that "the French invent and the English improve," or whether the contrary is the correct version, it is difficult to say, but there is one thing certain, that whenever any measure is considered of public utility the French authorities will allow no obstacle to stand in their way. For the improvement of this great city whole streets have been pulled down and enlarged, and trees planted in every available part. Only a few years ago there was not a single "refuge" to be seen in the streets, now they are to be found in every thoroughfare. Urinals are being multiplied in all directions, and public privies for both sexes in the form of neat *châlets* ornament the public squares and gardens. The floating swimming baths established on the Seine have hitherto been used only during the warm weather, but on the recommendation of the Société d'Hygiène arrangements are being made by the Municipal Council of Paris for the establishment of warm swimming baths for the winter, which on certain days of the week will be open gratuitously to soldiers, charity schools, and paupers.

The pavements of the streets in Paris have always been a source of trouble and anxiety to the municipality. Every kind of pavement, from wood to asphalt, has been tried in turn, but nothing has been found to equal the time-honoured stone pavement, which has the undoubted advantage of salubrity and economy. The wooden pavements that were put down a few years ago by way of experiment proved to be so expensive and insalubrious that they are all being rooted up again and replaced by granite. Bricks of asphalt are undergoing a trial, but it is predicted that they will not share a better fate than the wooden pavements, owing to the enormous expense that will be entailed. As for macadamised roads, they are simply abominable, for although they are comfortable to drive on when dry, in wet weather they are converted into swamps.

A right royal banquet was given on Sunday last to M. Chevreul, the venerable chemist and member of the Academy of Sciences, to celebrate his ninety-sixth birthday. The Café Riche, where the banquet was given, was most profusely decorated with garlands and the choicest flowers to do honour to the guest as a renowned horticulturist, and to him are principally indebted the great army of artificial flower manufacturers for his instructions in the art of tints. The banquet was presided over by M. Dumas, the celebrated chemist and president of the Institute, and I need hardly say that the other guests were also men of distinction in the various branches of science and art.

This reminds me of another *fête* which was lately given by the Société Française d'Hygiène, and at which another pioneer of science and civilisation was present. M. de

Lesseps, of world-wide renown, was specially invited to preside at the banquet, and was considered the honoured guest of the evening. In his toast the celebrated engineer related an anecdote in which he pointed out the necessity of one in his position as a traveller having some knowledge of medicine and surgery, as in his travels he was frequently so situated that he had to employ his skill as a doctor as well as an engineer. On one occasion while travelling through the deserts of Africa his own doctor who accompanied him and his party fell dangerously ill, and the doctor, prescribing for himself, suggested that he should be bled to save his life. M. de Lesseps, who had already performed some minor operations of surgery, had never had occasion to practise phlebotomy, but as his doctor's life was at stake he opened a vein in the bend of the arm, having previously practised his hand on a cabbage leaf, and was thus the means of saving his doctor from imminent death. In the toast proposed to the health of M. de Lesseps, he was congratulated at the approaching birth of his tenth child, he being himself in his seventy-sixth year.

Obituary.

GEORGE BODINGTON, M.D. ERLANGEN, L.R.C.P. ED.

DR. GEORGE BODINGTON, whose death at Sutton Coldfield, in his eighty-third year, we announced on Feb. 11th, was a descendant of one of the old yeoman families of Warwickshire—the Bodingtons of Cubbington, who have tilled their own land in that parish since the time of Henry VIII. As a boy he was sent to Magdalen College School at Oxford, and when seventeen years old was apprenticed to a Mr. Syer, a surgeon, of Atherstone, by whom he was transferred a year later to a Mr. Wheelwright, a surgeon in the City of London. He afterwards became a student at St. Bartholomew's Hospital, and obtained the L.S.A. in 1825. On this qualification Dr. Bodington began to practise in Birmingham; but in a very short time he removed to the neighbouring village of Erdington, where he carried on a successful practice till 1843. In this year he determined to devote his whole time to the treatment of the insane at the Driffold House Asylum, Sutton Coldfield, of which he had become proprietor in 1836. At this work he continued till his retirement in 1868, when he handed the asylum over to his son, Dr. G. F. Bodington. Since that date he mainly occupied himself with public work in connexion with the Royal Borough of Sutton Coldfield, of which he was Warden in the years 1852-3, 1853-4, and up to 1881 one of its most active members and magistrates. An acute observer, a vigorous thinker, and a good solid and fluent speaker, Dr. Bodington was always able to take his share in the public work connected with his position. His first medical essay was "A Letter on a Case of Asiatic Cholera addressed to the President and Council of the Central Board of Health, London," and published in 1831. This pamphlet was a vigorous protest against the use of bleeding and calomel, and displayed the same tendency to think and reason for himself, which made his later essay on the "Treatment and Cure of Pulmonary Consumption," 1840, so very noteworthy. In this little book Dr. Bodington anticipated by many years the modern views of the treatment of phthisis. In 1840, consumptives were closely and carefully confined from a fear of the evil influence of cold fresh air. Against this Dr. Bodington earnestly protested as "forcing them to breathe over and over again the same foul air contaminated with the diseased effluvia of their own persons." Arguing against the value of antimony, calomel, and bleeding, he urged the free administration of nutritious food and stimulants, with plenty of exercise in pure air and, if possible, dry "frosty air." He did not value sea air highly, but contended for the drier air of inland districts. His great specific was cold dry air, which he said had a most powerful influence in "healing and closing of cavities and ulcers of the lungs." It is remarkable that a village doctor should have arrived in 1840 at these conclusions, which anticipated some of our most recent teachings. It is less remarkable that he met with the usual fate of those who question authority. He was severely handled by the reviewers, and so discouraged from pursuing observations which might have been of the greatest value. In 1857, some years after he had given up general practice, a writer in the *Journal of Public Health* unearthed Dr. Bodington's treatise, and did him tardy but ample justice. We are glad again to claim for a general practitioner the high credit of having been the first, or among the first, to advocate the rational and scientific treatment of pulmonary consumption.

Medical News.

BRITISH MEDICAL SERVICE.—The following is a list of the candidates who were successful for appointments as Surgeons in this Service at the competitive examination held in London on Feb. 20th:—

	Marks.		Marks.
S. Westcott	2295	H. S. M'Gill	2005
H. R. Whitehead	2280	A. A. Pechell	2000
B. M. Skinner	2200	C. R. Tyrrell	2050
C. R. Bartlett	2195	J. Hickman	1980
J. D. T. Reckitt	2175	W. B. Thomson	1975
T. A. P. Marsh	2150	H. E. Deane	1945
R. Kirkpatrick	2140	S. O. Stuart	1940
A. C. A. Alexander	2095		

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for appointments in this Service who were successful at the competitive examination held at Burlington House on Feb. 20th and following days. Of the 31 candidates who competed for the eight appointments, 27 were reported qualified, and 4 retired from the examination:

	Marks.		Marks.
H. H. R. Charles	2405	G. Duncan	2245
J. P. Barry	2452	A. V. Anderson	2030
R. W. S. Lyons	2385	E. W. Reilly	1945
W. A. Sykes	2325	J. Scott	1900

NAVAL MEDICAL SERVICE.—The following is a list of the successful candidates for appointments as Surgeons in the Royal Navy at the competitive examination held at Burlington House on Feb. 20th and following days:—

	Marks.		Marks.
W. G. K. Barnes	2300	S. Farmer	1925
R. J. M'Cormack	2075	A. D. Peyton	1925
W. G. C. Smith	1905	J. S. Wray	1875

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 2nd:—

Atkinson, Thomas Renel, West Park, Clifton, Bristol.
Key, David Thomas, The Oval, Brixton.
Praagley, Henry John, West Cowes, Isle of Wight.
Williams, Charles, Llangennech, Carmarthen.

MR. JAMES NICHOLSON has given £500 to the Warrington Infirmary.

THE total amount realised by the Hospital Sunday collections in New York was 25,400 dollars.

THERE are at the present moment nearly 400 female physicians in active practice in twenty-six of the United States, the majority of them being settled in New York, Massachusetts, and Pennsylvania.

AN active canvass is going on in Bristol in aid of the funds of the Royal Infirmary. The *Mercury* publishes the names of some forty ladies and gentlemen authorised by the hospital committee to engage in the work.

MR. CHARLES MACKESSACK, a student of medicine in the University of Edinburgh, has died from the effects of a dissection wound sustained about a month ago. The deceased had almost completed his third year, and had achieved a high character for diligence and skill.

ROYAL SURREY COUNTY HOSPITAL.—The committee in their report, read at the annual meeting last week, mention the liberal contributions of working men as a gratifying element in the receipts. There were admitted during the year 1881, 441 in-patients; 281 patients were treated in their own homes, and 2732 as out-patients.

BOLTON INFIRMARY AND DISPENSARY.—On March 2nd the annual meeting of the subscribers to this institution was held in the board-room. The chairman expressed a hope that the new infirmary would shortly be handed over to the general committee. The sum subscribed by the working classes to the funds of the infirmary had amounted to £628, and it was intimated that two working men would be placed on the committee.

MRS. GLADSTONE has arranged for a drawing-room meeting, to be held at the official residence of the Prime Minister, in Downing-street, on the 21st inst., in aid of the proposed Scarlet Fever Convalescent Home. A concert in furtherance of the same object will be given at Dudley House during the season.

SANITARY INSTITUTE OF GREAT BRITAIN.—An exhibition of sanitary apparatus and appliances, and articles of domestic use and economy, will take place at Newcastle-on-Tyne, from Tuesday, Sept. 26th, to Saturday, Oct. 21st, 1882, in connexion with the fifth autumn congress of the Institute.

DR. FARQUHARSON, M.P., will preside at a meeting of the Sanitary Assurance Association to-day (Friday), at 7.30 P.M., when Mr. Henry Rutherfurd, Barrister-at-Law, will deliver an address on "Sanitary Assurance from a Householder's point of view." A discussion will follow the address.

THE subscribers to the Teddington and Hampton Wick Cottage Hospital held their annual meeting a few days ago, and were gratified by a statement of the good work done in the past year through the agency of the institution. A generous donor had given £500 to its funds, half of which was to be devoted to the fund for the provident dispensary, which it is proposed to associate with the hospital.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The sixth meeting of the twenty-sixth session was held at the Royal Kent Dispensary, Greenwich-road, on Friday evening, March 3rd, 1882, when the following papers were read:—"Remarks on Succussion within the Abdomen," by J. Braxton Hicks, M.D., F.R.S. "A Case of Intestinal Obstruction which recovered under the use of Belladonna," by R. Carrington, M.D., Physician to the Seamen's Hospital.

UNIVERSITY OF CAMBRIDGE.—Practical Anatomy in the dissecting-room will, we understand, be continued during the Easter vacation. The Demonstrator will take classes of students preparing for the second examination for M.B. on Mondays, Wednesdays, and Fridays, at noon, during the Easter vacation, beginning on March 27th, and give demonstrations in Human Anatomy during the Easter term on Mondays and Fridays at noon, beginning on Monday, April 24th. Mr. MacAlister will lecture on the Mechanics of the Human Skeleton during the Easter term on Wednesdays, at noon, beginning on Wednesday, April 26th. The above demonstrations and lectures are intended more especially for students preparing for the Natural Sciences Tripos.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ADAMS, MATTHEW A., F.R.C.S., F.C.S., has been appointed Public Analyst to the Borough of Maidstone.

BAKER, W. MORRANT, F.R.C.S.E., has been appointed Surgeon to St. Bartholomew's Hospital.

BRECKNELL, WILLIAM HENRY, M.D. St. And., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Beaconsfield District of the Amersham Union.

CRIPPS, W. HARRISON, F.R.C.S.E., has been appointed Assistant-Surgeon to St. Bartholomew's Hospital, vice Baker, appointed Surgeon.

DAVIES, WILLIAM, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer to the Llandilo, Talley, and Llansawel Districts of the Llandilo Union.

FIRTH, EUSTACE, M.B., C.M., has been elected Medical Officer to the Rishangles District of the Hartismere Union, vice Mr. Thomas Radford, resigned.

GLAISTER, JOHN, M.B., C.M.Aber., has been appointed Medical Officer to the Rothwell District of the Hunslet Union.

HUDSON, JOHN, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health to the Bradford (Lancashire) Urban Sanitary District.

HUTTON, HENRY R., M.A., M.B.Cantab., has been appointed Physician to the General Hospital for Children, Pendlebury, and Gartside-street, Manchester.

HYATT, JAMES TAYLOR, L.R.C.P.Ed., M.R.C.S., has been reappointed Medical Officer of Health for the Shepton Mallet Urban Sanitary District.

JONES, Mr. E. W. T., has been reappointed Public Analyst for the Borough of Wolverhampton.

KNOTT, WILLIAM, M.B., C.M., has been appointed Medical Officer to the Fifth District of the Middlesborough Union.

LIMONT, JAMES, M.A., B.Sc., M.B., C.M., M.R.C.S., has been appointed Senior House-Surgeon to the Newcastle Infirmary.

LOFTHOUSE, ARTHUR, M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the West Herts Infirmary, Hemel-Hempstead.

STAMFORD, WILLIAM, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for Tunbridge Wells, vice W. H. Rix, M.R.C.S., L.S.A.Lond., resigned.

STARK, MARK DUGALD, M.D., C.M. Trin. Coll. Toronto, L.R.C.P.Ed., has been appointed Medical Officer to the Hendred District of the Wantage Union.

STREET, ALFRED F., M.A., M.B.Camb., M.R.C.S., has been appointed Junior Resident Medical Officer at the Radcliffe Infirmary, Oxford, vice W. Collier, M.B., resigned.

TURNER, GEORGE, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer of Health to the Ware District.

WALSH, W. A. S., M.R.C.S., L.S.A.Lond., has been appointed one of the Medical Officers to the Worcester Dispensary and Provident Medical Institution, vice J. D. Jeffery, deceased.

WHITLA, WILLIAM, M.D.Q.U.I., L.R.C.P.Ed., has been appointed Physician to the Belfast Royal Hospital, vice Purdon, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BLACKETT.—On the 5th inst., at Wangford, Suffolk, the wife of Edward R. Blackett, M.D., of a son.

BLAMEY.—On the 27th ult., at Penryn, Cornwall, the wife of James Blamey, M.R.C.S., of a daughter.

BOLTON.—On the 26th ult., at Kustendjie, the wife of A. Irwin Bolton, M.B., A.B.T.C.D., Medical Officer to the Danube and Black Sea Railway Company, of a daughter—Terezina Emily.

HUNTER.—On the 7th inst., at Norfolk-crescent, Hyde-park, the wife of Surgeon General Hunter, M.D., F.R.C.P., and Hon. Surgeon to the Queen, of a son.

KEMP.—On the 5th inst., at Jermyn-street, St. James's, the wife of John R. Kemp, L.R.C.P.Lond., M.R.C.S., of a son.

LUBBOCK.—On the 5th inst., at Grosvenor-street, the wife of Montagu Lubbock, M.D., of a son.

PEACEY.—On the 3rd inst., at Lewisham High-road, S.E., the wife of William Peacey, M.B., of a daughter.

ROOSE.—On the 28th ult., at Regency-square, Brighton, the wife of Robson Roose, M.D., F.R.C.P., of a son.

SCHOLEFIELD.—On the 3rd inst., at Sowerby Bridge, Yorks., the wife of Geo. E. Scholefield, M.B., C.M., of a son.

SMITH.—On the 28th ult., at Clapton-square, the wife of R. Smith, M.R.C.S., of a daughter.

MARRIAGES.

JOYNT—HARDING.—On the 2nd ult., by special licence, at the residence of the bride's mother, Belvedere, Jamaica, by the Rev. J. E. Howard, Henry W. Joynt, Surgeon, Army Medical Department, eldest son of the late Henry Joynt, Esq., of Ballina, co. Mayo, to Henrietta Emma, fourth daughter of the late Rev. Richard Harding.

MOFFAT—ADIE.—On the 2nd inst., at 2, St. Colme-street, Edinburgh, by the Rev. John A. Cooke, of Auchtergaven, and the Rev. T. S. Anderson, of Crailing, Robert Moffat, M.D., of Falkirk, to Martha, eldest daughter of the late James Gray, of Kalemouth, Roxburghshire, and widow of the late James Arthur Adie, of Voe, Shetland.

MURPHY—LOS.—On the 9th ult., at the British Embassy at the Hague, by the Rev. Edward Brine, M.A., British Chaplain, James Murphy, Esq., M.D., of Holly House, Sunderland, to Adelaide Harriett Lucretia (Leda), eldest daughter of Peter Roland Los, Esq., of the Hague, formerly Consul for the Netherlands at Sunderland.

PRICHARD—ADYE.—On the 21st ult., at the Parish Church, Bradford-on-Avon, Arthur William, son of A. Prichard, M.D., F.R.C.S., of Clifton, to Sarah Ann, daughter of W. Adye, M.D., of Bradford-on-Avon.

TURNER—TURNER.—On the 1st inst., at the Registry Office, Leytonstone, W. Pickett Turner, M.R.C.S., of Leytonstone, to Ellen C. Turner, youngest daughter of Henry Turner, Esq., late of Woodstock, Oxon.

DEATHS.

BRIDGES.—On the 20th ult., at Philadelphia, Robert Bridges, M.D., Emeritus Professor of Chemistry in the Philadelphia College of Pharmacy, and formerly President of the Academy of Natural Sciences of Philadelphia, aged 76.

BURROWS.—On the 4th inst., at Cavendish-square, W., Elinor, the beloved wife of Sir George Burrows, Bart., M.D., F.R.S., &c.

CUMMING.—On the 13th December, 1881, at Temuca, New Zealand, Stuart M'Donald Cumming, M.R.C.S.

DENNE.—On the 3rd inst., at Eastbourne, William Denne, F.R.C.S., late Medical Superintendent of the Three Counties Asylum, Arlesey, Beds, aged 73.

INGLIS.—On the 20th ult., at 22, Upper Baker-street, London, Julia Rosa, widow of John Inglis, M.D., late of H.M. Bengal Army, aged 49. Friends will kindly accept this (the only) intimation.

STURROCK.—On the 4th inst., at Broughty Ferry, Dundee, David Ramsay Sturrock, M.D., H.E.I.C.S.

WOOD.—On the 11th November, 1881, on board the *Highflyer*, off Mauritius, of heart disease, Francis Henry Wood, M.R.C.S., late of New Romney, Kent.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 9th, 1882.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 3	29·41	S.E.	41	39	..	49	40	·02	Hazy
,, 4	29·65	S.E.	35	34	..	52	30	..	Foggy
,, 5	29·72	W.	50	48	..	53	32	..	Cloudy
,, 6	29·76	W.	50	45	..	52	45	..	Cloudy
,, 7	30·24	W.	49	45	..	55	39	..	Cloudy
,, 8	30·25	W.	53	50	..	58	45	..	Cloudy
,, 9	30·35	W.	52	50	..	57	48	..	Overcast

Medical Diary for the ensuing Week.

Monday, March 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.: on Tuesday, 9 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "Anatomy, Physiology, and Zoology of the Edentata."
ROYAL INSTITUTION.—5 P.M. Mr. Maybridge, "On Animal Movements."
MEDICAL SOCIETY OF LONDON.—Opening Address by the President (Mr. Francis Mason)—Dr. Drewitt, "On a Case of Marked Tetany in a Child (living specimen).—Mr. Reginald Harrison (Liverpool), "On the Early Treatment of Prostatic Enlargement."—Dr. Fancourt Barnes will exhibit a Specimen of Stricture of the Rectum mistaken for Retroflexion of the Uterus.

Tuesday, March 14.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor John G. M'Kendrick, "On the Mechanism of the Senses."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Theodore Williams, "On the Influence of Albuminuria on the Temperature Course of Phthisis Pulmonalis, with an Account of its Pathology."

Wednesday, March 15.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.—Skin Department.—1.45 P.M., and on Saturday at
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "Anatomy, Physiology, and Zoology of the Edentata."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Sir Joseph Fayrer, "On Climate and Fevers of India."

Thursday, March 16.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL INSTITUTION.—3 P.M. Professor Tyndall, "On Resemblances of Sound, Light, and Heat."
HARVEIAN SOCIETY.—Dr. Fitzpatrick, "On a Case of Puerperal Septicæmia."—Mr. W. B. Owen, "On a Retrospect of Fifty Years' Professional Experience."

Friday, March 17.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations. 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "Anatomy, Physiology, and Zoology of the Edentata."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lectures: Sir Joseph Fayrer, "On Climate and Fevers of India."
ROYAL INSTITUTION.—3 P.M. Captain Abney, "On Infra-Red Rays of the Spectrum."

Saturday, March 18.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor H. G. Seeley, "On Volcanoes."

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SCIENTIFIC TRIFLING.

IT is scientific trifling, and worse, to make wantonly hazardous excursions in balloons like those which have recently been made, to the peril and loss of life. "The Balloon Society of Great Britain," if it have any wish to be ranked as an association for scientific purposes, must administer a rebuke to some of its members, who seem to regard the art of the aeronaut as a mere pastime for reckless spirits. Life is too sacred a trust to be ventured, without rhyme or reason, in enterprises which are simply hare-brained.

CHARING-CROSS HOSPITAL.

WE trust the authorities of Charing-cross Hospital will be better advised as to the questionable taste of the big gold letters over the handsome building they have just erected for the medical school. An old saying, "Good wine needs no bush," is applicable here, and there can be no necessity to rival the mural eloquence of the adjoining public-house.

TRICHINIASIS.

To the Editor of THE LANCET.

SIR,—Surely a very simple remedy, if its use were persevered in, would be a very likely cure for that formidable disease, trichiniasis—I mean sulphur. When taken internally for a considerable time the smell of the breath and the oliver in the pockets are evidences of its absorption into the system, and its effect on the acarus scabiei is sufficient to show its deleterious effect on parasitic animal life. Sufficient attention does not appear to have been paid to its effect, but it would seem likely to be of much service in the case of worms and entozoa generally. I do not find in works on materia medica that such effect is attributed to it, but may not this be from its being within the reach of all?

I am, Sir, yours truly,
Feb. 27th, 1882. J. H. GRAMSHAW, M.D.

IODINE IN THE TREATMENT OF ASTHMA.

To the Editor of THE LANCET.

SIR,—Having obtained some really excellent results from the use of iodine internally in the treatment of asthma, I venture to recommend a trial of it in obstinate and old cases. I have prescribed it several times lately in the form of Gardner's syrup of hydriodic acid, without other drugs, and in each case with benefit. Iodide of potassium had been previously taken unsuccessfully. In syphilis I have also found it highly useful in suitable cases.

I am, Sir, yours truly,
LOUIS LEWIS, M.D.
Albert-street, Regent's-park, Feb. 28th, 1882.

NÆVUS OF THE LABIA MAJORA.

To the Editor of THE LANCET.

SIR,—Will any of your readers kindly inform me of the best treatment of a case of venous nævus of one of the labia majora of a child nine months of age? It has commenced to break down, but causes much distress to the unfortunate infant.—I am, Sir, yours obediently,
Feb. 28th, 1882. NONENSIS.

M.D.—The resolution referred to was originally passed on April 10th, 1876, and is as follows:—"No fellow, member, extra-licentiate, or licentiate of the College shall be authorised or entitled by virtue of any diploma or licence granted by the College to assume the title of Doctor, or to append to his name the title of Doctor of Medicine, or the letters M.D., or any other letters indicating that he is a graduate in medicine of a university."

CERVICAL HYDROCELE.

To the Editor of THE LANCET.

SIR,—With reference to Dr. Whitson's case of cervical hydrocele—an hydrocele of unusual size—the following case may also interest your readers. It came under my care in 1878, at the St. Marylebone General Dispensary.

The patient, a charwoman, had not been able to lie down at night for two years on account of the difficulty of breathing, the swelling in her neck caused by pressing upon the trachea. It was of six years' growth, lay deeply in the lower part of the posterior triangle of the neck, was apparently oval in shape, and about the size of a large orange. After it had been tapped by means of a trocar and cannula, a solution of iron (two drachms to an ounce) was injected, the injection being kept in the cyst through plugging the cannula.

In a few days pus formed in the hydrocele, as generally happens when cystic goitre is treated after this manner. The plugging was then removed, and poultices applied. At this time the silver cannula was changed for one of red rubber, having a layer of webbing between the walls of the cannula, like the Morrant Baker tracheotomy tubes. Such a cannula could be easily shortened and kept in its place as the cyst became smaller. It also prevented irritation of the walls of the cyst.

After three months the treatment resulted in a complete cure, leaving a scar over the centre of the clavicle immediately behind the sterno-mastoid muscle. I remain, Sir, yours faithfully,

Devonshire-street, Portland-place, W., Feb. 27th, 1882. W. PUGIN THORNTON.

Mr. Hastings.—Dr. Brown-Séquard's address is 15, Rue Soufflot, Paris.

Gynecologist has not enclosed his card.

Dr. Ellis.—The paper will be inserted in an early number.

Speculator.—We are not able to answer the question. Our correspondent might consult the Monthly Investment List of Government and Corporation Stocks and Bonds, by Mr. Walter Playford, 14, Cornhill.

TOOTHACHE.

To the Editor of THE LANCET.

SIR,—For the relief of common toothache I recommend and use with benefit a toothbrush (one with bristles, some long and some short preferable) well charged with common yellow soap, and with this and water (cold or tepid) to thoroughly cleanse the teeth and mouth. Then, if requisite, to smoke a brown paper cigar, retaining the smoke, which contains, I believe, creasote in vapour, in the mouth for half a minute, or as long as convenient. A few drops of oil of juniper with tincture of opium on lint are good after cleansing—for more permanent relief a few minims of tincture of galsominum with ammonia and alkaline bicarbonates. I am of opinion that the pain in hollow teeth is often caused by some living thing in partially putrid food lodged in the tooth, and that therefore a cleaning with soap-and-water should be the first step.

I am, Sir, your obedient servant,

CHARLES J. YOUNG, M.R.C.S. Eng.

Chilton Polden, Feb. 23th, 1882.

P.S.—I have given small doses of bromide of potassium and tincture of hyoscyamus with benefit.

MEDICAL HISTORY OF HOUSES.

To the Editor of THE LANCET.

SIR,—A time may one day arrive when we shall have a regular medical history sheet for every house, as we have now in the army a sheet for every individual. I think the existence of such a sheet in every house, with entries of all epidemic disease occurring in it, would hasten on sanitary reform very much. Medical officers of health I suppose do keep a register of deaths by streets, but a house register of scarlatina, measles, diphtheria, and the rest would be a great tell-tale of sanitary neglect. What does a landlord at present care how his tenants suffer by untimely deaths and preventable illnesses? Bring home the facts to him by keeping a record which an incoming tenant may claim to see, and there will be little doubt of his rapidly coming to his senses and putting his house in sanitary order.—I am, Sir, yours, &c.,

Feb. 1822. G. J. H. EVATT, M.D., S.M.

Gamut.—We believe there are no sufficient grounds for the assertions made with regard to the action of the uvula on the pitch of the voice.

Universitatis.—Our correspondent will be justified in giving no personal sanction to the use of the false title.

Little Sutton District Medical Club.—The handbill is discreditable, but it is not worthy of serious notice.

DISTRIBUTION OF PHTHISIS.

To the Editor of THE LANCET.

SIR,—Will some of your readers kindly inform me where I can find statistics as to the distribution of phthisis throughout Great Britain, with the peculiarities of climate and soil which obtain in the parts where it most extensively prevails?—I am, Sir, yours truly,

Honley, March 3rd, 1882. T. SMAILES, M.R.C.S., &c.

"THE RECENT FOGS."

To the Editor of THE LANCET.

SIR,—I have received, from a writer personally unknown to me, a letter with reference to fogs, in which he says, "I was in a fog off Jersey, in the middle of the day, so black, I never saw anything like it in London. On another occasion, off Penzance, 'Land's End,' the captain came into the cabin saying, 'Gentlemen, you had better dress and come on deck, as I do not know the moment you may not have to jump for your lives.' On coming on deck it was so black we could not see the captain. We had certainly no coal smoke, but I can offer no explanation." Here it is clear that smoke is not a cause, which I for one have not assumed, although it cannot be doubted that it intensifies the darkness and offensive smell of town fogs.

I remain, Sir, your obedient servant,

Enfield, Feb. 28th, 1882. W. B. KESTEVEN, M.D.

To the Editor of THE LANCET.

SIR,—I beg to suggest that the consistence of fog is damp air arising from waters and low lands bordering them, mixed with the gases of polluted water and decomposed earth; also that the density of London fogs may have increased as the metropolitan area extended, as the millions of chimneys emitting smoke, which, with all its heavier atoms, is held suspended and mixed with the fog, offering a greater and prolonged resistance to the pressure of air from the outside, also the sun's action.

London fogs are now dangerous, and are growing more so as the shafts for carrying off the poisoned gas from the house drains and sewers increase. These gases, like the smoke, mix and are held suspended, and during the fog's existence are, as it were, a poisonometer, and may possibly be forming an infinitesmal coating over the tarry atoms of smoke, the inhaling of which into the system may produce what I would venture to call "fog diarrhœa."

I remain, Sir, yours very respectfully,

Victoria-road, South Kensington, W., Feb. 27th, 1882. C. R. CRESWELL.

"TOBACCO SMOKING: AN APPEAL."

To the Editor of THE LANCET.

SIR,—In reply to "G.," a hard-worked lawyer, I should advise him to smoke a clay pipe, after having first filled the same to the extent of about one-third with common dry salt. It is necessary under such circumstances to be careful in drawing the smoke through the pipe, as the latter will be drawn into the mouth. The salt soon becomes solidified, and remains as an ordinary plaster plug. A fresh plug should be used daily. I am, Sir, yours, &c.,

Salisbury, March 4th, 1882. W. CORDIN[illegible]

To the Editor of THE LANCET.

SIR,—I have known the smoking of chamomile flowers, [illegible] without a small mixture of tobacco, answer in cases similar to [illegible]. The receptacle should be bruised first, and the flowers recent.

I am, Sir, yours, &c.,

Mansfield, March 8th, 1882. THOS. GODFREY.

Messrs. Fletcher and Stevenson.—The paper has not been preserved.

1882 had better consult the Medical Directory.

One whose name is fortunately useless.—It is hardly worth while to notice the small publication.

Inquisitive.—We do not prescribe.

DIAGNOSIS OF RENAL CALCULUS.

To the Editor of THE LANCET.

SIR,—Will you allow me to ask the distinguished surgeons who discussed nephro-lithotomy at the Clinical Society on Jan. 27th whether the method of search for intra-renal stone by means of the needle might be used even before incision? In their skilled hands might not such punctures be made the means of preliminary diagnosis, and thus the presence, site, and even size of stone ascertained?

I am, Sir, yours, &c.,

Park-square, Leeds, March 2nd, 1882. CLIFFORD ALLBUTT.

A CAUTION.

To the Editor of THE LANCET.

SIR,—I am desirous of putting medical men on their guard against an impostor, who is assuming the names of various old St. Bartholomew's men, with the object of obtaining money on the usual plea of destitution. His scheme (so far as I can trace it) is to assume the names of old students who for some reason—e.g., seniority, are likely to be unknown personally to those to whom he makes application.

I am, Sir, your obedient servant,

March 1st, 1882. W.

AUSTRALIA.

To the Editor of THE LANCET.

SIR,—Will any of your readers kindly inform me whether there is an opening for practice in Australia for a young medical man, doubly qualified and well up to his work both in hospital and private practice?

I am, Sir, yours faithfully,

Feb. 27th, 1882. M.R.C.S.

THE USE OF TOBACCO.

DR. MUIR HOWIE, author of "Lectures on Stimulants and Narcotics," remarks in our excellent contemporary, *Knowledge*, that "tobacco has the same effect upon the nerve-cells that water has upon a coal fire. Apply water in small quantity, and your fire will burn more slowly; apply a large-enough bucketful, and it will cease to exist. When the cook rakes up the ashes, and covers her fire before going to bed, she performs the same physical experiment as her master, who soothes his nerves with tobacco before retiring for the night. The cook wishes her fire to smoulder during the night. She therefore applies an agent which will check combustion by partially excluding oxygen from her fuel; her master applies to his nervous system an agent which diminishes oxidation, and thus seriously interferes with vital action."

M.D. Lond. (Bristol) will see that the point is referred to in a letter which we print this week.

ACTION OF CHLORATE OF POTASH ON THE HUMAN BODY.

To the Editor of THE LANCET.

SIR,—Among the therapeutical notes in the last number of THE LANCET is one having reference to the chemical action of chlorate of potash on the human body. From analyses by Ludwig made upon the blood, urine, and contents of the stomach in a fatal case of poisoning by chlorate, that investigator comes to the conclusion that the salt in question is completely reduced in the body into chloride of potassium.

Having some years ago, at the instance of Dr. Sinclair Coghill, of Ventnor, undertaken an elaborate series of experiments on this subject, I may perhaps be allowed to give the results at which I arrived. The subject has bearings not only upon toxicology, but much more important ones in therapeutical respects, chlorate being frequently administered with a view to supply oxygen to the blood in cases of defective oxidation.

[redacted] denied that chlorate has powerful diuretic and other [redacted] chemical reasons it appeared extremely doubtful [redacted] a living body part with its oxygen. When treated [redacted] ily and completely gives off that gas, but when [redacted] tinately refuses to decompose in a similar [redacted] might possibly yield chlorine under the [redacted] oric acid of the gastric juice, but in the [redacted] ion appeared quite out of the question.

[redacted] as able not only to discover soon after [redacted] the salt unaltered in the urine, but to [redacted] is excreted by the kidneys. I found that [redacted] d a half after the commencement of the [redacted] he dose (from half to two drachms) had [redacted] at further intervals of two, two, three, [redacted] ars, quantities were excreted amounting [redacted] d 10·98 per cent. In all no less than 93·8 [redacted] en appeared within twenty-nine hours in the [redacted] ment 94·4 per cent. was similarly recovered. [redacted] ining fraction of the dose was decomposed in [redacted] pared to any; I believe that it was not reduced, [redacted] to analysis, the exact determination of chlorates in [redacted] an organic matter presenting unusual difficulties.

I can say, therefore, with a considerable amount of certainty that in the living body chlorate does not undergo any decomposition. It is, however, possible that it does so after death by processes of putrefaction. Some such post-mortem change must have led Ludwig to the conclusions at which he arrived, unless indeed the chlorate had been completely separated by the kidneys before the death of the patient took place. Similar cases are on record in which large doses of arsenic have been so perfectly eliminated during life that no trace of the poison could be detected after death.—I remain, Sir, yours obediently,

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Public Analyst.

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If the Swiss authorities would treat Englishmen with the same liberality as would be accorded to a Swiss subject in England, no complaints could well arise. I do not think a foreign medical man, practising his profession in an honourable manner in England, has ever been prosecuted for so doing. Unfortunately I am aware of the case of an English surgeon who has been subjected to this indignity in Switzerland.

I am, Sir, your obedient servant,

London, March 6th, 1882. ALFRED WISE, M.D.

Justitia.—Fees have often been recovered in cases where the obstetrician was engaged and not sent for. An obstetric engagement hinders a medical man very much even when he is not called on to fulfil it.

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E. D. (Surgeon) might perhaps succeed by oiling the meatus thoroughly and using a small speculum. Failing this, the hairs might be cut short with fine scissors.

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In two days, without a bad symptom, he passed the dart per rectum. The above seems to illustrate well the advisability of keeping the bowels at rest and giving solid food diet in these cases, for unusually grave symptoms might have been expected from the swallowing of such a sharp-pointed foreign body.

I am, Sir, yours faithfully,

GORDON B. MESSUM, L.R.C.P. Lond.

King William's Town, South Africa,
Nov. 3rd, 1881.

CERVICAL HYDROCELE.

To the Editor of THE LANCET.

SIR,—With reference to Dr. Whitson's case of cervical hydrocele—an hydrocele of unusual size—the following case may also interest your readers. It came under my care in 1878, at the St. Marylebone General Dispensary.

The patient, a charwoman, had not been able to lie down at night for two years on account of the difficulty of breathing, the swelling in her neck caused by pressing upon the trachea. It was of six years' growth, lay deeply in the lower part of the posterior triangle of the neck, was apparently oval in shape, and about the size of a large orange. After it had been tapped by means of a trocar and cannula, a solution of iron (two drachms to an ounce) was injected, the injection being kept in the cyst through plugging the cannula.

In a few days pus formed in the hydrocele, as generally happens when cystic goitre is treated after this manner. The plugging was then removed, and poultices applied. At this time the silver cannula was changed for one of red rubber, having a layer of webbing between the walls of the cannula, like the Morrant Baker tracheotomy tubes. Such a cannula could be easily shortened and kept in its place as the cyst became smaller. It also prevented irritation of the walls of the cyst.

After three months the treatment resulted in a complete cure, leaving a scar over the centre of the clavicle immediately behind the sterno-mastoid muscle. I remain, Sir, yours faithfully,

Devonshire-street, Portland-place, W., W. PUGIN THORNTON.
Feb. 27th, 1882.

Mr. Hastings.—Dr. Brown-Séquard's address is 15, Rue Souffiot, Paris.

Gynecologist has not enclosed his card.

Dr. Edis.—The paper will be inserted in an early number.

Speculator.—We are not able to answer the question. Our correspondent might consult the Monthly Investment List of Government and Corporation Stocks and Bonds, by Mr. Walter Playford, 14, Cornhill.

TOOTHACHE.

To the Editor of THE LANCET.

SIR,—For the relief of common toothache I recommend and use with benedit a toothbrush (one with bristles, some long and some short preferable) well charged with common yellow soap, and with this and water (cold or tepid) to thoroughly cleanse the teeth and mouth. Then, if requisite, to smoke a brown paper cigar, retaining the smoke, which contains, I believe, creasote in vapour, in the mouth for half a minute, or as long as convenient. A few drops of oil of juniper with tincture of opium on lint are good after cleansing—for more permanent relief a few minims of tincture of golseminum with ammonia and alkaline bicarbonates. I am of opinion that the pain in hollow teeth is often caused by some living thing in partially putrid food lodged in the tooth, and that therefore a cleaning with soap-and-water should be the first step.

I am, Sir, your obedient servant,
CHARLES J. YOUNG, M.R.C.S. Eng.

Chilton Polden, Feb. 23th, 1882.

P.S.—I have given small doses of bromide of potassium and tincture of hyoscyamus with benefit.

MEDICAL HISTORY OF HOUSES.

To the Editor of THE LANCET.

SIR,—A time may one day arrive when we shall have a regular medical history sheet for every house, as we have now in the army a sheet for every individual. I think the existence of such a sheet in every house, with entries of all epidemic disease occurring in it, would hasten on sanitary reform very much. Medical officers of health I suppose do keep a register of deaths by streets, but a house register of scarlatina, measles, diphtheria, and the rest would be a great tell-tale of sanitary neglect. What does a landlord at present care how his tenants suffer by untimely deaths and preventable illnesses? Bring home the facts to him by keeping a record which an incoming tenant may claim to see, and there will be little doubt of his rapidly coming to his senses and putting his house in sanitary order.—I am, Sir, yours, &c.,

Feb. 1822. G. J. H. EVATT, M.D., S.M.

Gamut.—We believe there are no sufficient grounds for the assertions made with regard to the action of the uvula on the pitch of the voice.

Universitatis.—Our correspondent will be justified in giving no personal sanction to the use of the false title.

Little Sutton District Medical Club.—The handbill is discreditable, but it is not worthy of serious notice.

DISTRIBUTION OF PHTHISIS.

To the Editor of THE LANCET.

SIR,—Will some of your readers kindly inform me where I can find statistics as to the distribution of phthisis throughout Great Britain, with the peculiarities of climate and soil which obtain in the parts where it most extensively prevails?—I am, Sir, yours truly,

Honley, March 3rd, 1882. T. SMAILES, M.R.C.S., &c.

"THE RECENT FOGS."

To the Editor of THE LANCET.

SIR,—I have received, from a writer personally unknown to me, a letter with reference to fogs, in which he says, "I was in a fog off Jersey, in the middle of the day, so black, I never saw anything like it in London. On another occasion, off Penzance, 'Land's End,' the captain came into the cabin saying, 'Gentlemen, you had better dress and come on deck, as I do not know the moment you may not have to jump for your lives.' On coming on deck it was so black we could not see the captain. We had certainly no coal smoke, but I can offer no explanation." Here it is clear that smoke is not a cause, which I for one have not assumed, although it cannot be doubted that it intensifies the darkness and offensive smell of town fogs.

I remain, Sir, your obedient servant,

Enfield, Feb. 28th, 1882. W. B. KESTEVEN, M.D.

To the Editor of THE LANCET.

SIR,—I beg to suggest that the consistence of fog is damp air arising from waters and low lands bordering them, mixed with the gases of polluted water and decomposed earth; also that the density of London fogs may have increased as the metropolitan area extended, as the millions of chimneys emitting smoke, which, with all its heavier atoms, is held suspended and mixed with the fog, offering a greater and prolonged resistance to the pressure of air from the outside, also the sun's action.

London fogs are now dangerous, and are growing more so as the shafts for carrying off the poisoned gas from the house drains and sewers increase. These gases, like the smoke, mix and are held suspended, and during the fog's existence are, as it were, a poisonometer, and may possibly be forming an infinitesimal coating over the tarry atoms of smoke, the inhaling of which into the system may produce what I would venture to call "fog diarrhœa."

I remain, Sir, yours very respectfully,

Victoria-road, South Kensington, W., C. E. CRESWELL.
Feb. 27th, 1882.

"TOBACCO SMOKING: AN APPEAL."

To the Editor of THE LANCET.

SIR,—In reply to "G.," a hard-worked lawyer, I should advise him to smoke a clay pipe, after having first filled the same to the extent of about one-third with common dry salt. It is necessary under these circumstances to be careful in drawing the smoke through the salt, or the latter will be drawn into the mouth. The salt soon becomes solidified, and remains as an ordinary plaster plug. A fresh plug should be used daily. I am, Sir, yours, &c.,

Salisbury, March 4th, 1882. W. CORBIN FINCH.

To the Editor of THE LANCET.

SIR,—I have known the smoking of chamomile flowers, with or without a small mixture of tobacco, answer in cases similar to "G.'s." The receptacle should be bruised first, and the flowers recent.

I am, Sir, yours, &c.,

Mansfield, March 8th, 1882. THOS. GODFREY.

Messrs. Fletcher and Stevenson.—The paper has not been preserved.

1882 had better consult the Medical Directory.

One whose name is fortunately useless.—It is hardly worth while to notice the small publication.

Inquisitive.—We do not prescribe.

DIAGNOSIS OF RENAL CALCULUS.

To the Editor of THE LANCET.

SIR,—Will you allow me to ask the distinguished surgeons who discussed nephro-lithotomy at the Clinical Society on Jan. 27th whether the method of search for intra-renal stone by means of the needle might be used even before incision? In their skilled hands might not such punctures be made the means of preliminary diagnosis, and thus the presence, site, and even size of stone ascertained?

I am, Sir, yours, &c.,

Park-square, Leeds, March 2nd, 1882. CLIFFORD ALLBUTT.

A CAUTION.

To the Editor of THE LANCET.

SIR,—I am desirous of putting medical men on their guard against an impostor, who is assuming the names of various old St. Bartholomew's men, with the object of obtaining money on the usual plea of destitution. His scheme (so far as I can trace it) is to assume the names of old students who for some reason—e.g., seniority, are likely to be unknown personally to those to whom he makes application.

I am, Sir, your obedient servant,

March 1st, 1882. W.

AUSTRALIA.

To the Editor of THE LANCET.

SIR,—Will any of your readers kindly inform me whether there is an opening for practice in Australia for a young medical man, doubly qualified and well up to his work both in hospital and private practice?

I am, Sir, yours faithfully,

Feb. 27th, 1882. M.R.C.S.

THE USE OF TOBACCO.

DR. MUIR HOWIE, author of "Lectures on Stimulants and Narcotics," remarks in our excellent contemporary, *Knowledge*, that "tobacco has the same effect upon the nerve-cells that water has upon a coal fire. Apply water in small quantity, and your fire will burn more slowly; apply a large enough bucketful, and it will cease to exist. When the cook rakes up the ashes, and covers her fire before going to bed, she performs the same physical experiment as her master, who soothes his nerves with tobacco before retiring for the night. The cook wishes her fire to smoulder during the night. She therefore applies an agent which will check combustion by partially excluding oxygen from her fuel; her master applies to his nervous system an agent which diminishes oxidation, and thus seriously interferes with vital action."

M.D. Lond. (Bristol) will see that the point is referred to in a letter which we print this week.

ACTION OF CHLORATE OF POTASH ON THE HUMAN BODY.

To the Editor of THE LANCET.

SIR,—Among the therapeutical notes in the last number of THE LANCET is one having reference to the chemical action of chlorate of potash on the human body. From analyses by Ludwig made upon the blood, urine, and contents of the stomach in a fatal case of poisoning by chlorate, that investigator comes to the conclusion that the salt in question is completely reduced in the body into chloride of potassium.

Having some years ago, at the instance of Dr. Sinclair Coghill, of Ventnor, undertaken an elaborate series of experiments on this subject, I may perhaps be allowed to give the results at which I arrived. The subject has bearings not only upon toxicology, but much more important ones in therapeutical respects, chlorate being frequently administered with a view to supply oxygen to the blood in cases of defective oxidation.

It cannot be denied that chlorate has powerful diuretic and other effects, but from chemical reasons it appeared extremely doubtful whether it could in the living body part with its oxygen. When treated by itself it certainly readily and completely gives off that gas, but when in aqueous solution it obstinately refuses to decompose in a similar manner. In the stomach it might possibly yield chlorine under the influence of the free hydrochloric acid of the gastric juice, but in the alkaline blood any decomposition appeared quite out of the question.

Operating upon myself, I was able not only to discover soon after administration of the chlorate the salt unaltered in the urine, but to determine the ratio at which it is excreted by the kidneys. I found that in as short a time as an hour and a half after the commencement of the experiment 17·23 per cent. of the dose (from half to two drachms) had passed into the urine, whilst at further intervals of two, two, three, eleven and a half, and nine hours, quantities were excreted amounting to 23·62, 16·08, 10·91, 15·01, and 10·93 per cent. In all no less than 93·8 per cent. of the chlorate taken appeared within twenty-nine hours in the urine. In another experiment 94·4 per cent. was similarly recovered. Whether the small remaining fraction of the dose was decomposed in the body I am not prepared to say; I believe that it was not reduced, but was simply lost to analysis, the exact determination of chlorates in the presence of organic matter presenting unusual difficulties.

I can say, therefore, with a considerable amount of certainty that in the living body chlorate does not undergo any decomposition. It is, however, possible that it does so after death by processes of putrefaction. Some such post-mortem change must have led Ludwig to the conclusions at which he arrived, unless indeed the chlorate had been completely separated by the kidneys before the death of the patient took place. Similar cases are on record in which large doses of arsenic have been so perfectly eliminated during life that no trace of the poison could be detected after death.—I remain, Sir, yours obediently,

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GORDON B. MESSUM, L.R.C.P. Lond.

King William's Town, South Africa,
Nov. 3rd, 1881.

THE ABORTIVE BALLOON TRIP.

WE are asked to state that the life-saving appliances fitted around outside the balloon car, which prevented the car from sinking or upsetting, thereby ensuring the safety of the aeronauts from drowning, as also the life-belts worn by them, were manufactured by Messrs. Cornish and Co. The balloon car protectors are similar to the boat protectors, and are especially designed for converting ordinary boats into absolute lifeboats.

"NIGHT DEMANDS ON MEDICAL MEN."

To the Editor of THE LANCET.

SIR,—Your correspondent, "A General Practitioner," is, I am sure, just in what he says, but I think he might be bolder and go farther. Why should anyone make a profession of getting up at night gratuitously to save life? The man (be he medical or not) who is called upon in some unexpected emergency to render assistance to one of his fellow-creatures, and fails to do so, with the consequence that that fellow-creature loses his life, is morally guilty of manslaughter; but to make a profession of being *the* man who may be called upon in all such emergencies in his immediate neighbourhood is quite a different matter, and it is quite irrational and unjust to expect it, it seems to me, unless there be added an understanding that such calls must invariably be paid for.

Now, I do not see how the public mind is to become pervaded with this understanding, except by finding that attendance in emergencies is not to be obtained by unknown people unless they pay the fee when they make the demand for the attendance. When once this became customary and imperative, it would, I believe, be easily effected. There are but few people who could not find without loss of time the necessary money, and for those few with the need would arise the supply of some fund upon which they could draw, provided either by charity, the State, or insurance. Every such person might have a ticket supplied by the managers of the fund, which he could at any time produce as security to any medical man for payment out of the fund for a single attendance in an emergency. The extreme desirability or necessity of medical attendance, which may arise at any moment for anyone, does not supply a reason, it seems to me, for expecting that it may always be obtained gratuitously, but rather a reason why everybody should keep about them the means of obtaining it. The public do not expect other necessaries of life to be supplied gratuitously to those who cannot purchase them, and consequently it intervenes and provides them. The same feeling should prevail with regard to the case in question, and it is, in fact, the over-readiness to attend to all calls without consideration of payment, which is found among medical men, which prevents it. This, however, like all routine charity, works in the long run much more mischief than good. When medical men can feel even ordinary security for fair remuneration for night calls by strangers, everyone will also be able to feel secure of obtaining assistance readily and quickly in any emergency, and whoever contributes to bring about this desirable state of things will, I submit, be a public benefactor. I am, Sir, yours obediently,

Feb. 21st, 1882. OVUM.

Baffled.—It is a very troublesome affection, and one that varies much in different individuals. Local remedies are of very great service *if efficiently applied*. To order an injection is not enough; the surgeon must see that it is properly used, and used *often*.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Professor Marshall, London; Dr. Burney Yeo, London; Mr. Macnamara, Dublin; Mr. Pizey, Clevedon; Dr. Griffiths; Mr. E. W. Wallis, London; Dr. Robert Jones, Earlswood; Mr. Finch, Salisbury; Dr. Edis, London; Dr. Wise, London; Mr. E. Nock; Mr. Collison; Mrs. Bedingfield; Dr. G. S. Ranking, Segowlie; Dr. C. Harrison, Lincoln; Dr. C. Finlay, Havana; Surgeon-Major Pringle, Meerut; Mr. B. Bell, Edinburgh; Dr. Jacob, Leeds; Mr. Borham, London; Dr. Grabham, Pontefract; Dr. Carter, Bath; Dr. Wilson, Greenock; Mr. Hayward; Mr. Roberts; Mr. Ormsby, Dublin; Mr. Farquharson, Stockton; Mr. Priestley, Clapham; Dr. Knocker, Bonn; Mr. Hadley; Mr. F. W. Webb; Messrs. Street and Co., London; Dr. Clifford Allbutt, Leeds; Mr. Meadows, Hastings; Dr. Kent Spender, Bath; Mr. Wallis Brown, Gloucester; Mr. Smalles, Honley; Mr. Wilde, Mr. Field, London; Dr. Brett, Watford; Messrs. Lehmann and Co., London; Mr. Shirley Murphy, London; Dr. Oliver, Newcastle-on-Tyne; Dr. Neale, London; Mr. Wright, London; Dr. Shorthouse; Dr. Pratt, Newtown; Dr. Cortis; Mr. Knowsley Thornton, London; Messrs. A. and C. Black, Edinburgh; Messrs. Harrison and Brass, Elgin; Dr. McCall Anderson, Glasgow; Miss Robinson, Newcastle-on-Tyne; Mr. Cole, Hatton; Mr. Hodgkins, Leicester; M. De Mosy, Paris; Mr. Robinson, Easingwold; Messrs. Prieto and Co., London; Mr. Hawkins, London; Mr. Robinson, Denbigh; Messrs. Hugh and Son, King's Lynn; Mr. Chute, Port Elizabeth; Mr. Champion, St. Thomas; Mr. Clifford, Rochester; Messrs. Stevenson and Travis, Liverpool; Dr. Holland, Calverley; Dr. Myers, London; Mr. Marsh, Cheetham; Mr. Deacon, Knighton; Mr. Whitton, Towcester; Mr. Thomson; Messrs. Cornish and Co.; Dr. Taylor, Scarborough; Mr. W. C. Cass, Eccleston; Mr. Shelswell, London; Mr. T. Godfrey, Mansfield; Mr. Martindale, London; Dr. Learn, London; Mr. Butler, London; Mr. Wilson, Carlisle; A Subscriber; M.D., Spalding; Med. Off., M.B.; M.D., Lond.; X. X. X.; Speculator; F. A. C.; Constant Subscriber; M.D.; Student; Gamut; Inquisitive; One whose name is fortunately Useless; L.R.C.P.; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Fraser, Burnham; Messrs. Moore and Co., Sunderland; Mr. Wright, Bottesford; Mr. McAlley; Mr. Taylor; Mr. Rainer, Ipswich; Mr. Wylie, Belfast; Mr. James, Pontypridd; Dr. Collier, Lincoln; Dr. Newman, Bowness; Messrs. Randell and Co., London; Messrs. Anderson and Shaw, Inverness; Mr. Mackintosh, Poolewe; Messrs. Bragg and Co., Taunton; Mr. Smith, Southampton; Messrs. Christy and Co., London; Mr. Vacher, Birkenhead; Mr. Banks, Wolverhampton; Mr. Terry, Winchester; Messrs. Bradshaw, Nottingham; Messrs. Smith and Son, Manchester; Dr. Woakes, London; Dr. Schofield, Sowerby-bridge; Miss Reynolds, Ashford; Mr. Maxwell, Gainsboro'; Mr. Williams, Holborn; Dr. Walker, Cheltenham; Messrs. Sharpe and Co., Glasgow; Mr. Clifford, Rochester; Mr. Humby, Bournemouth; Messrs. Porteous and Co., Glasgow; Mr. Thomas, Sheffield; Dr. Tilecoat, Sandcoates; Mr. Blaney, Penryn; Mr. Elliott, Carlisle; Mr. Kinder, Leicester; Mr. Kinsey, Bedford; Mr. Macrae, Hartlepool; Mr. Wall, Wigan; Mr. Trippier, Liverpool; Dr. Bramwell, Edinburgh; Dr. McEnery, Cerne Abbas; Mr. Denne, Eastbourne; K. P., West Hampstead M. S.; W. H. H.; Partner, Nottingham; X. Y. Z., Whitney; S. M., Jersey; Medicus, Cork; J. M. S., Noman's-heath; Lambda; Alpha, Glasgow; R. M. D., Munslow; Lawson, Edinburgh; Doctor, Cubittown; Medicus, Minchinhampton; Desideratam; J. G. G., Bury St. Edmunds; A. B., Faversham; H. W., Bath; M. S., Birmingham; Doctor, Limerick; Mirror; C. P.; Medicus, Seaford; Medicus Coleman-street; Excelsior; Medicus, Edinburgh; Medicus, Jury-street; R. L. G.; Z., Cradley-heath; &c., &c.

Northern Whig, Church Standard, Revista Clinica Medica, Church of England Temperance Chronicle, The Ironmonger, Richmond and Twickenham Times, Building and Engineering Times, Keene's Bath Journal, Western Gazette, Greenock Advertiser, Gibraltar Chronicle, Wellington Weekly News, English Lakes Visitor, West Cumberland Times, &c., have been received.

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